ACADEMIC YEAR (2021-2022)							
		J.K.K.MUNIRAJAH COLLEGE OF TECHNOLOGY T.N.Palayam(po),Gobi(tk)-638506, Erode(dt).					Metric No 1.3.2
S.No	Name of the course	course code	programme offering	Experiential learning			Number of students
				project work	field work	internship	
(2021-2022) Regulation-2017							
1	Project Work	IT8811	INFORMATION TECHNOLOGY	✓			21
2	Software Engineering	CS8494	INFORMATION TECHNOLOGY	✓			2
3	Computer Networks	CS8591	INFORMATION TECHNOLOGY	✓			8
4	Object Oriented Analysis and Design	CS8592	INFORMATION TECHNOLOGY	✓			2
5	Artificial Intelligence	CS8691	INFORMATION TECHNOLOGY	✓			10
6	Mobile Computing	CS8601	INFORMATION TECHNOLOGY	✓			6
7	Cryptography and Network Security	CS8792	INFORMATION TECHNOLOGY	✓			4
8	Cloud Computing	CS8791	INFORMATION TECHNOLOGY	✓			6

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Approved by AICTE, New Delhi And Affiliated to Anna University, Chennai.

T.N. Palayam (Po), Gobi (Tk), Erode (Dt) – 638 506

INFORMATION TECHNOLOGY

2021-2022

S.NO	REG.NO	STUDENT NAME	PROJECT	INTERNSHIP	FIELD VISIT
1	731218205001	CHANDRU K	✓		
2	731218205002	GOBINATH M	✓		
3	731218205003	JAYAKUMAR M	✓		
4	731218205004	JOTHIKA C	✓		
5	731218205005	KARVANNAN K	✓	✓	
6	731218205007	MAHESHWARI B	✓		
7	731218205009	MEENA N	✓		
8	731218205011	MONISHA S	✓		
9	731218205012	PRABHAKARAN S	✓	✓	
10	731218205013	PRASANTH K	✓	✓	
11	731218205014	PRASANTH M	✓	✓	
12	731218205016	RAGAVAN R	✓		
13	731218205017	RAJAMANICKAM G	✓		
14	731218205019	RANJITHA S	✓	✓	
15	731218205020	REKA N	✓		
16	731218205023	SANMUGAPRIYA R	✓		
17	731218205025	SIVASHANKAR G	✓		
18	731218205026	SOWNDARYA A	✓	✓	

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19	731218205027	SUMATHI M	✓		
20	731218205028	SURYA M	✓		
21	731218205029	VASANTHAKUMAR K	✓		
22	731219205002	GOWTHAM.H		✓	
23	731219205004	MAHANTESH.S		✓	
24	731219205005	NANDHINI.R		✓	
25	731219205007	NAVEEN.S		✓	
26	731219205008	NINGARAJU.S		✓	
27	731219205009	NITHYA.K		✓	
28	731219205010	PRABHU.M		✓	
29	731219205011	PRIYADHARSINI.T		✓	
30	731219205018	VAIDEVI.M		✓	
31	731219205019	VAIGAIRAJ.M		✓	
32	731220205001	AJAYSRI. A		✓	
33	731220205006	DHARANI.M		✓	
34	731220205009	GOKUL.S		✓	
35	731220205017	PARVATHY.A		✓	
36	731220205018	PRIYANKA.S		✓	
37	731220205020	RAVI SANKARAN.N		✓	
38	731220205022	SIVABALAJI.N		✓	
39	731220205303	SHILPA.C		✓	

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INFORMATION TECHNOLOGY

S.No	Name of the Course that include experiential learning through Project Work/Internship/Field Visit
1	Project Work
2	Software Engineering
3	Computer Networks
4	Object Oriented Analysis and Design
5	Artificial Intelligence
6	Mobile Computing
7	Cryptography and Network Security
8	Cloud Computing

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PROJECT

CS8691	ARTIFICIALINTELLIGENCE	L	T	P	C
		3	0	0	3

OBJECTIVES:

- To understand the various characteristics of Intelligent agents
- To learn the different search strategies in AI
- To learn to represent knowledge in solving AI problems
- To understand the different ways of designing software agents
- To know about the various applications of AI.

UNITI INTRODUCTION 9

Introduction–Definition-FutureofArtificialIntelligence–CharacteristicsofIntelligentAgents–TypicalIntelligentAgents–ProblemSolvingApproachtoTypicalAIproblems.

UNITII PROBLEMSOLVINGMETHODS 9

Problem solving Methods - Search Strategies- Uninformed - Informed - Heuristics - Local SearchAlgorithmsandOptimizationProblems-SearchingwithPartialObservations-ConstraintSatisfactionProblems—ConstraintPropagation-BacktrackingSearch-GamePlaying-Optimal Decisions in Games–Alpha-Beta Pruning-Stochastic Games

UNITIII KNOWLEDGEREPRESENTATION 9

First Order Predicate Logic – Prolog Programming – Unification – Forward Chaining-Backward Chaining – Resolution – Knowledge Representation - Ontological Engineering-Categories and Objects – Events - Mental Events and Mental Objects - Reasoning Systems for Categories -Reasoning with Default Information

UNITIV SOFTWAREAGENTS 9

ArchitectureforIntelligentAgents–Agentcommunication–NegotiationandBargaining–ArgumentationamongAgents–TrustandReputationinMulti-agentsystems.

UNITV APPLICATIONS 9

AI applications – Language Models – Information Retrieval- Information Extraction – Natural Language Processing - Machine Translation – Speech Recognition – Robot – Hardware – Perception—Planning—Moving

TOTAL:45PERIODS

OUTCOMES:

Up on completion of the course, the students will be able to:

- Use appropriate search algorithms for any AI problem
- Represent a problem using first order and predicate logic
- Provide the apt agent strategy to solve a given problem
- Design software agents to solve a problem
- Design applications for NLP that use Artificial Intelligence.

TEXTBOOKS:

1 S.RussellandP.Norvig,"ArtificialIntelligence:AModernApproach‖,PrenticeHall,ThirdEdition,2009.

2 I.Bratko,—Prolog:ProgrammingforArtificialIntelligence‖,Fourthedition,Addison-WesleyEducationalPublishersInc.,2011.

REFERENCES:

1. M.TimJones,—ArtificialIntelligence:ASystemsApproach(ComputerScience)‖,JonesandBartlettPublishers,Inc.;FirstEdition,2008
2. NilsJ.Nilsson,—TheQuestforArtificialIntelligence‖,CambridgeUniversityPress,2009.
3. WilliamF.ClocksinandChristopherS.Mellish,‖ProgramminginProlog:UsingtheISOStandard‖,Fifth Edition,Springer,2003.
4. GerhardWeiss,—MultiAgentSystems‖, SecondEdition,MITPress,2013.
5. DavidL.PooleandAlanK.Mackworth,—ArtificialIntelligence:FoundationsofComputationalAgents‖,CambridgeUniversityPress,2010.

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MULTIPLE OBJECT DETECTION FOR BLIND PEOPLE USING DEEP LEARNING

PROJECT REPORT

A submitted by

K.CHANDRU (731218205001)

R.RAGAVAN (731218205016)

K.VASANTHAKUMAR (731218205029)

In partial fulfilment for the award of the degree

Of

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in

INFORMATION TECHNOLOGY

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JUNE-2022

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BONAFIDE CERTIFICATE

Certified that this project report on **"MULTIPLE OBJECT DETECTION FOR BLIND PEOPLE USING DEEP LEARNING"** is the confide work Of **"K.CHANDRU (731218205001), R.RAGAVAN (731218205016) and K.VASANTHAKUMAR (73218205029)"** Who carried out the project work under my supervision

21/6/22

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Associate Professor

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21/6/22

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T.N.Palayam

Submitted for the Viva-Voce examination held on 22/06/2022 & AN

22/6/22

INTERNAL EXAMINER

EXTERNAL EXAMINER

PRINCIPAL
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ABSTRACT

The object characteristics analysis using image processing techniques for automated vision system used at agricultural field. In agriculture research of automatic object characteristics detection is essential one in monitoring large fields of crops, and thus automatically detects symptoms of object characteristics as soon as they appear on plant leaves. The proposed decision making system utilizes image content characterization and supervised classifier type of neural network. Image processing techniques for this kind of decision analysis involves pre-processing, feature extraction and classification stage. At Processing, an input image will be resized and region of interest selection performed if needed. Here, colour and texture features are extracted from an input for network training and classification. Colour features like mean, standard deviation of HSV colour space and texture features like energy, contrast, homogeneity and correlation. The system will be used to classify the test images automatically to decide object characteristics. For this approach, automatic classifier NN be used for classification based on learning with some training samples of that some category. This network uses tangent sigmoid function as kernel function. Finally, the simulated result shows that used network classifier provides minimum error during training and better accuracy in classification.

CHAPTER 1

INTRODUCTION

1.1. INTRODUCTION TO OBJECT DETECTION

Object Detection is the process of finding and recognizing real-world object instances such as car, bike, TV, flowers, and humans out of an images or videos. An object detection technique lets you understand the details of an image or a video as it allows for the recognition, localization, and detection of multiple objects within an image.

It is usually utilized in applications like image retrieval, security, surveillance, and advanced driver assistance systems (ADAS).Object Detection is done through many ways:

- Feature Based Object Detection
- Viola Jones Object Detection
- SVM Classifications with HOG Features
- Deep Learning Object Detection

Object detection from a video in video surveillance applications is the major task these days. Object detection technique is used to identify required objects in video sequences and to cluster pixels of these objects.

The detection of an object in video sequence plays a major role in several applications specifically as video surveillance applications. Object detection in a video stream can be done by processes like pre-processing, segmentation, foreground and background extraction, feature extraction. Humans can easily detect and identify objects present in an image.

CONCLUSION AND FUTURE ENCHANCEMENT

7.1 CONCLUSION

We have applied and planned to utilize the YOLO algorithm for object recognition because of its favourable circumstances. This algorithmic program is existent in different fields to tackle some real-life problems like security, checking roadways or in any event, serving externally debilitated individuals with facilitate of input. In this, we have made a model for different variety of objects. This is used in period areas that need object detection for pre-processing in that. A scope would be to educate the system on a video sequence for usage in the following the inclusion of a short-lived constant interface would facilitate sleek detection and additional best than per-frame detection. Object detection is considered as a fundamental step in deploying self-riding automobiles and robotics.

7.2 FUTURE ENCHANCEMENT

The autonomous driving of construction vehicles is a topic on which there has been very little research. There is a significant difference between autonomous driving of construction vehicles on the job site and automated driving of conventional vehicles on the road; as the environment changes, elements that affect autonomous driving will change as well, making it particularly difficult. As a result, future work on developing autonomous vehicles using the data collected from this research can be done at the scaled construction site at PDRL laboratory, BTH. When it comes to future use cases for object detection, the possibilities are unlimited. Recognition of vehicle plates, self-driving automobiles, object tracking, face recognition, medical imaging, object counting, object extraction from an image or video, and human identification of YOLO algorithm.

CS8591 **COMPUTERNETWORKS** L T P C

3 0 0 3

OBJECTIVES:

- To understand the protocol layering and physical level communication.
- To analyze the performance of a network.
- To understand the various components required to build different networks.
- To learn the functions of network layer and the various routing protocols.
- To familiarize the functions and protocols of the Transport layer.

UNIT I INTRODUCTION AND PHYSICAL LAYER 9

Networks — Network Types — Protocol Layering — TCP/IP Protocol suite — OSI Model —Physical Layer: Performance – Transmission media – Switching – Circuit-switched Networks—Packet Switching.

UNIT II DATA-LINK LAYER & MEDIA ACCESS 9

Introduction–Link-Layer Addressing –DLC Services–Data-Link Layer Protocols –HDLC –PPP-MediaAccessControl-WiredLANs:Ethernet-WirelessLANs–Introduction–IEEE802.11,Bluetooth–ConnectingDevices.

UNIT III NETWORK LAYER 9

NetworkLayerServices–Packetswitching–Performance–IPV4Addresses–Forwardingof IP Packets - Network Layer Protocols: IP, ICMP v4 – Unicast Routing Algorithms – Protocols–MulticastingBasics–IPV6Addressing–IPV6Protocol.

UNITIV TRANSPORTLAYER 9

Introduction–TransportLayerProtocols–Services–PortNumbers–UserDatagramProtocol–TransmissionControlProtocol–SCTP.

UNITV APPLICATIONLAYER 9

WWW and HTTP–FTP–Email–Telnet–SSH–DNS–SNMP.

TOTAL: 45 PERIODS

OUTCOMES:

On Completion of the course, the students should be able to:

- Understand the basic layers and its functions in computer networks.
- Evaluate the performance of a network.
- Understand the basics of how data flows from one node to another.
- Analyze and design routing algorithms.
- Design protocols for various functions in the network.
- Understand the working of various application layer protocols

TEXTBOOK:

1. Behrouz A. Forouzan, Data Communications and Networking, Fifth Edition TMH,2013.

REFERENCES

1. Larry L. Peterson, Bruce S. Davie, Computer Networks: A Systems Approach, Fifth Edition, Morgan Kaufmann Publishers Inc.,2012.
2. William Stallings, Data and Computer Communications, Tenth Edition, PearsonEducation,2013.
3. NaderF.Mir,ComputerandCommunicationNetworks,SecondEdition,Prentice Hall,2014.
4. Ying-Dar Lin, Ren-Hung Hwang and Fred Baker, Computer Networks: An OpenSourceApproach,McGrawHillPublisher,2011.
5. James F. Kurose, Keith W. Ross, Computer Networking, A Top-Down ApproachFeaturingthe Internet, SixthEdition,PearsonEducation,2013.

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CS8792	CRYPTOGRAPHYANDNETWORKSECURITY	L	T	P	C
		3	0	0	3

OBJECTIVES:

- To understand Cryptography Theories, Algorithms and Systems.
- To understand necessary Approaches and Techniques to build protection mechanisms in order to secure computer networks.

UNITI INTRODUCTION 9

Securitytrends-Legal,EthicalandProfessionalAspectsofSecurity,NeedforSecurityatMultiple levels, Security Policies - Model of network security – Security attacks, services andmechanisms–OSIsecurityarchitecture–Classicalencryptiontechniques:substitution techniques, transposition techniques, steganography- Foundations of modern cryptography:perfectsecurity–informationtheory–productcryptosystem–cryptanalysis.

UNITII SYMMETRICKEYCRYPTOGRAPHY 9

MATHEMATICS OF SYMMETRIC KEY CRYPTOGRAPHY: Algebraic structures - Modulararithmetic-Euclid"s algorithm- Congruence and matrices -Groups, Rings, Fields-Finite fields-SYMMETRICKEYCIPHERS:SDES–Block cipher Principle of DES–Strength of DES – Differential and linear cryptanalysis - Block cipher design principles – Block ciphermode of operation – Evaluation criteria for AES – Advanced Encryption Standard - RC4 –Key distribution.

UNITIII PUBLICKEYCRYPTOGRAPHY 9

MATHEMATICSOFASYMMETRICKEYCRYPTOGRAPHY:Primes–PrimalityTesting–Factorization – Euler's totient function, Fermat's and Euler's Theorem - Chinese Remainder Theorem— Exponentiation and Alogarithm-ASYMMETRIC KEY CIPHERS:RSA cryptosystem – Key distribution – Key management – Diffie Hellman key exchange -ElGamalcryptosystem–Ellipticcurvearithmetic-Ellipticcurvecryptography.

UNITIV MESSAGEAUTHENTICATIONANDINTEGRITY 9

Authentication requirement – Authentication function – MAC – Hash function – Security ofhashfunctionandMAC–SHA–Digitalsignatureandauthenticationprotocols–DSS-EntityAuthentication: Biometrics, Passwords, Challenge Response protocols-Authenticationapplications-Kerberos,X.509

UNITV SECURITYPRACTICEANDSYSTEMSECURITY 9

ElectronicMailsecurity—PGP,S/MIME—IPsecurity—WebSecurity-

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SYSTEMSECURITY:Intruders–Maliciousssoftware–viruses–Firewalls.

TOTAL 45 PERIODS

OUTCOMES:

At the end of the course, the student should be able to:

- Understandthefundamentalsofnetworkssecurity,securityarchitecture,threatsandvulnera bilities
- Applythedifferentcryptographicoperationsofsymmetriccryptographicalgorithms
- Apply the different cryptographic operations of public key cryptography
- ApplythevariousAuthenticationschemestosimulatedifferentapplications.
- Understand various Security practices and System security standards

TEXTBOOK:

1. WilliamStallings,CryptographyandNetworkSecurity:PrinciplesandPractice,PHI3rdEditio n,2006.

REFERENCES:

1. C K Shyamala, N Harini and Dr. T R Padmanabhan: Cryptography and Network Security,Wiley IndiaPvt.Ltd
2. BehrouzA.Foruzan,CryptographyandNetworkSecurity,TataMcGrawHill2007.
3. CharlieKaufman,RadiaPerlman,andMikeSpeciner,NetworkSecurity:PRIVATECommun icationinaPUBLICWorld,PrenticeHall,ISBN0-13-046019-2

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ARDUINO BASED GRASS CUTTER FULLY AUTOMATED

A PROJECT REPORT

Submitted by

GOBINATH.M	**(731218205002)**
RAJAMANICKAM.G	**(731218205017)**
SURYA.M	**(731218205028)**

in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

in

INFORMATION TECHNOLOGY

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JUNE – 2022

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ANNA UNIVERSITY:CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report on **"ARDUINO BASED GRASS CUTTER FULLY AUTOMATED "** is the bonafide work **"GOBINATH.M(731218205002), RAJAMANICKAM.G (731218205017),** and **SURYA.M (731218205028)"** who carried out the project work under my supervision.

21/6/22

SIGNATURE

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HEAD OF THE DEPARTMENT

Associate Professor

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21/6/22

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T.N.Palayam

Submitted for the Viva-Voce examination held on 22.06.2022 (AN)

21/6/22

INTERNAL EXAMINER

PRINCIPAL

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EXTERNAL EXAMINER

ABSTRACT

This grass cutter is a fully automated grass cutting robotic vehicle that also avoids obstacles and is capable of fully automated grass cutting without the need for any human interaction. The system used 9V batteries to power the vehicle movement motors as well as the grass cutter motor. The grass cutter and vehicle motors are interfaced to an Arduino family microcontroller that controls the working of all the motors. Here we have interfaced an ultrasonic sensor for object detection. The microcontroller moves the vehicle motors in forwarding direction in case no obstacle is detected. On obstacle detection the ultrasonic sensor monitors it and the microcontroller thus stops the grass cuter motor to avoid any damage to the object\human/animal whatever it is. The microcontroller then turns the robotic as long as it gets clear of the object and then moves the grass cutter in forwarding direction again.

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CHAPTER 1

INTRODUCTION

This project provides the designing steps for automated grass cutter, whose aim is to cut the grass of the specified area which is specified to the device without any human interaction. The output is achieved by using the sensors and various components. The ultimate goal of this device is to create a similar device as traditional grass cutter with better efficiency and of low cost.

1.1 SCOPE OF THE PROJECT

This project provides the designing steps for automated grass cutter, whose aim is to cut the grass of the specified area which is specified to the device without any human interaction. The output is achieved by using the sensors and various components. The ultimate goal of this device is to create a similar device as traditional grass cutter with better efficiency and of low cost.

1.2 DOMAIN OVERVIEW

1.2.1 OVERVIEW OF EMBEDDED SYSTEMS

An embedded system is a special-purpose computer system designed to perform one or a few dedicated functions, often with real-time computing constraints. It is usually embedded as part of a complete device including hardware and mechanical parts. In contrast, a general-purpose computer, such as a personal computer, can do many different tasks depending on programming. Embedded systems have become very important today as they control many of the common devices we use.

CHAPTER 5

CONCLUSION AND FUTURE WORK

5.1 CONCLUSION

This project entitled Manufacturing of Arduino based grass cutter successfully completed and the results obtained are satisfactory. It will easier for the people who are going to take the project for the furth modifications. This project is more suitable for a common man as it is havir much more advantages no fuel cost, no pollution and no fuel residue, les wear and tear because of less number of moving components and this can b operated by using Battery. This will give much more physical exercise to the people and can be easily handled . So it is much more suitable for grass cutting also.This efficiency can be increased by using some other mechanism. and speed of motor is reduce because we have used heavy material and this material can be replaced by using light weight material and design of blades should be done based on types of grass is used to cut. The project which we have done surly reaches the average families because the grass can be trimmed with minimum cost and with minimum time Finally this project may give an inspiration to the people who can modify and can obtain better result.

5.2 FUTURE WORK

Fully automated Arduino based grass cutter cuts grass efficiently based on the technique implemented although some improvements can be done is future. so that the grass cutter will become more flexible. In the current situation the robot is able to do its objective with 100% success features can be added with the conventional components. The precision of grass cutting can be improved and the precision of edges of area to be operated can be also improved. Automatic blade changing functions can also be added and also function to set the size of grass to be cutter can be added.

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CS8494 **SOFTWARE ENGINEERING** L T P C
3 0 0 3

OBJECTIVES:

- To understand the phases in a software project
- Tounderstandfundamentalconceptsofrequirementsengineeringand AnalysisModeling.
- To understand the various software design methodologies
- To learn various testing and maintenance measures

UNITI SOFTWAREPROCESSANDAGILEDEVELOPMENT 9

Introduction to Software Engineering, Software Process, Perspective and Specialized Process Models–Introduction to Agility-Agile process-Extreme programming-XP Process.

UNITII REQUIREMENTSANALYSISAND SPECIFICATION 9

Software Requirements: Functional and Non-Functional, User requirements, System requirements, SoftwareRequirementsDocumentRequirementEngineeringProcess:FeasibilityStudies,Requirements elicitationandanalysis,requirementsvalidation,requirementsmanagement-Classical analysis:Structured system Analysis, Petri Nets-Data Dictionary.

UNITIII SOFTWARE DESIGN 9

Design process — Design Concepts-Design Model– Design Heuristic — Architectural Design -Architectural styles, Architectural Design, Architectural Mapping using Data Flow- User Interface Design: Interface analysis, Interface Design –Component level Design: Designing Class based components, traditional Components.

UNITIV TESTINGANDMAINTENANCE 9

Software testing fundamentals-Internal and external views of Testing-white box testing - basis path testing-control structure testing-black box testing- Regression Testing — Unit Testing — Integration Testing— Validation Testing— System Testing And Debugging–Software Implementation Techniques: Coding practices-Refactoring-Maintenance and Reengineering-BPRmodel-Reengineeringprocessmodel-ReverseandForwardEngineering.

UNITV PROJECTMANAGEMENT 9

Software Project Management: Estimation – LOC, FP Based Estimation, Make/Buy Decision COCOMO I & II Model – Project Scheduling – Scheduling, Earned Value Analysis Planning –Project Plan, Planning Process, RFP Risk Management – Identification, Projection - Risk Management-Risk Identification-RMMM Plan-CASETOOLS

TOTAL:45PERIODS

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OUTCOMES:

On Completion of the course, the students should be able to:

- Identify the key activities in managing a software project.
- Compare different process models.
- Concepts of requirements engineering and Analysis Modeling.
- Apply systematic procedure for software design and deployment.
- Compare and contrast the various testing and maintenance.
- Manage project schedule, estimate project cost and effort required.

TEXTBOOKS:

1. RogerS.Pressman, —Software Engineering– APractitioner"s Approach‖,SeventhEdition,McGraw-HillInternationalEdition,2010.
2. IanSommerville,—SoftwareEngineering‖,9thEdition,PearsonEducationAsia,2011.

REFERENCES:

1. RajibMall,—FundamentalsofSoftwareEngineering‖,ThirdEdition,PHILearningPrivate Limited,2009.
2. PankajJalote,—SoftwareEngineering,APreciseApproach‖,WileyIndia,2010.
3. KelkarS.A.,—SoftwareEngineering‖,PrenticeHallofIndiaPvtLtd,2007.
4. StephenR.Schach,—SoftwareEngineering‖,TataMcGraw-HillPublishingCompanyLimited,2007.
5. http://nptel.ac.in/.

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CS8592 **OBJECT ORIENTED ANALYSIS AND DESIGN** **LTPC**

3003

OBJECTIVES:

- To understand the fundamentals of object modeling
- To understand and differentiate Unified Process from other approaches.
- To design with static UML diagrams.
- To design with the UML dynamic and implementation diagrams.
- To improve the software design with design patterns.
- To test the software against its requirements specification

UNITI UNIFIEDPROCESSAND USE CASEDIAGRAMS **9**

IntroductiontoOOADwithOOBasics-UnifiedProcess–UMLdiagrams–UseCase–Casestudy –theNextGenPOSsystem,Inception-UsecaseModelling–RelatingUsecases– include,extendandgeneralization–WhentouseUse-cases

UNITII STATIC UML DIAGRAMS **9**

Class Diagram— Elaboration – Domain Model – Finding conceptual classes and description classes – Associations – Attributes – Domain model refinement – Finding conceptual classHierarchies–AggregationandComposition-Relationshipbetweensequencediagramsandusecases—WhentouseClassDiagrams

UNITIII DYNAMICAND IMPLEMENTATIONUML DIAGRAMS **9**

Dynamic Diagrams – UML interaction diagrams - System sequence diagram – Collaboration diagram – When to use Communication Diagrams - State machine diagram and Modelling– WhentouseStateDiagrams-Activitydiagram–Whentouseactivitydiagrams

Implementation Diagrams - UML package diagram- When to use package diagrams - ComponentandDeploymentDiagrams–WhentouseComponentandDeploymentdiagrams

UNITIV DESIGN PATTERNS **9**

GRASP: Designing objects with responsibilities – Creator – Information expert – Low Coupling –High Cohesion—Controller **Design Patterns – creational** – factory method – **structural** – Bridge – Adapter – **behavioural** –Strategy–observer–Applying GoF design patterns–Mapping design to code

UNITV TESTING **9**

Object Oriented Methodologies – Software Quality Assurance – Impact of object orientation

on Testing–Develop Test Cases and Test Plans

TOTAL:45PERIODS

OUTCOMES:

At the end of the course, the students will be able to:

- Expresss of tware design with UML diagrams
- Design software applications using OO concepts.
- Identify various scenarios based on software requirements
- TransformUMLbasedsoftwaredesignintopatternbaseddesignusingdesignpatterns
- Understand the various testing methodologies for OO software

TEXTBOOKS:

1. CraigLarman,—ApplyingUMLandPatterns:AnIntroductiontoObject-OrientedAnalysisandDesignandIterativeDevelopment‖,ThirdEdition,PearsonEducation,2005.
2. AliBahrami-Object Oriented Systems Development -McGrawHillInternationalEdition-1999

REFERENCES:

1. ErichGamma,andRichardHelm,RalphJohnson,JohnVlissides,—Designpatterns:ElementsofReusableObject-OrientedSoftware‖,Addison-Wesley,1995.
2. MartinFowler,—UMLDistilled:ABriefGuidetotheStandardObjectModelingLanguage‖,Thirdedition,Addison Wesley,2003.

PRINCIPAL
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FOREST FIRE DETECTION USING NODEMCU WITH IOT

A PROJECT REPORT

Submitted by

JAYAKUMAR M (731218205003)

SIVASHANKAR G (731218205025)

in partial fulfillment for the award of the degree

of

BACHELOR OF TECHNOLOGY

in

INFORMATION TECHNOLOGY

J .K.K.MUNIRAJAH COLLEGE OF TECHNOLOGY

T.N.PALAYAM, GOBI-638 512

ANNA UNIVERSITY: CHENNAI 600 025

JUNE 2022

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BONAFIDE CERTIFICATE

Certified that this project report on **"FOREST FIRE DETECTION USING NODEMCU WITH IOT"** is the bonafide work of **"JAYAKUMAR M (731218205003), SIVASHANKAR G (731218205025)"** who carried out the project work under my supervision.

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Submitted for the Viva-Voce examination held on 22-06-2022 / AN

22/6/22
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EXTERNAL EXAMINER

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ABSTRACT

Forest fire is getting worse for all these days which can be detected and predicted using NodeMCU based on IoT. In this project, DTH11 is interfaced to NodeMCU detects the temperature and humidity produced from the fire. Soil moisture sensor senses moisture level in soil. LDR senses light intensity. Accelerometer senses position of our kit. Ultrasonic sensor detects distance and object interfaces where we place our kit The values are taken from the Sensor and is uploaded to the cloud i.e. in Thingspeak. In the advancing world, it is very crucial to protect our environment. Many incidents of man-made and natural disasters are occurring around the world. Forest fires are one such catastrophe for environment. Once the fire inside the deep forest starts, it burns and destroys the complete forest region. Such disasters should be curbed. The objective of this work is to design and implement an IoT based system which is self-sustaining and would predict and detect the forest fires and send the exact location to concerned officials which would help fire fighting personals to extinguish the fire n the location when it is in its initial stages. The developed system uses different oT sensors to communicate and transmit data.

Keywords: WSN, ESP8266, Things Speak, Forest fire, DHT11 Sensor, RDUINO, Raspberry Pi.

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INTRODUCTION

Fire accidents are common incidents all around the world most of the time this ends up in human life loss. These accidents can happen in any environment such as home, industries, hospitals etc. If accident occurs in an industrial environment the fatality of the situation is very high. This can be solved by designing a general system to monitor any type of environment remotely or locally.

1.1 DOMAIN OVERVIEW

OVERVIEW OF EMBEDDED SYSTEMS

An embedded system is a special-purpose computer system designed to perform one or a few dedicated functions, often with real-time computing constraints. It is usually embedded as part of a complete device including hardware and mechanical parts. In contrast, a general-purpose computer, such as a personal computer, can do many different tasks depending on programming. Embedded systems have become very important today as they control many of the common devices we use. Since the embedded system is dedicated to specific tasks, design engineers can optimize it, reducing the size and cost of the product, or increasing the reliability and performance. Some embedded systems are mass-produced, benefiting from economies of scale.

In general, "embedded system" is not an exactly defined term, as many systems have some element of programmability. For example, Handheld computers share some elements with embedded systems such as the operating systems and microprocessors which power them but are not truly embedded systems, because they allow different applications to be loaded and peripherals to be connected.

CHAPTER 8
CONCLUSION AND FUTURE ENHANCEMENT

CONCLUSION

Early cautioning and quick reaction to a fire breakout are the main approaches to dodge incredible misfortunes and natural and social legacy harms. Hence, the most critical objectives in flame observation are fast and solid identification and restriction of the fire. It is substantially less demanding to stifle a fire when the beginning area is known, and keeping in mind that it is in its beginning periods. Data about the advance of flame is likewise profoundly profitable for dealing with the fire amid every one of its stages. In light of this data, the fire battling staff can be guided on focus to hinder the fire before it achieves social legacy destinations and to smother it rapidly by using the required putting out fires hardware

FUTURE ENHANCEMENT

This study firstly reveals that IoT technology is a very promising green technology for the future in detecting efficiently the forest fires in our country. Secondly, and through the real experiments performed in the field, we conclude the effectiveness of the project and it's suitability to the context of our country mainly during summer seasons. The more data recovered by IOT about forest fires means the more effective fire management by forest authorities. Hence, introducing the paradigm of multi-modal detection of forest fires seems to be a good solution for the future in which scalar data and multi-media data can be collected by heterogeneous sensors. Such IOT based multi-modal detection systems can resolve efficiently some outstanding problems such as more precision of detection and reducing false alarm rate and also the avoidance of the destruction of motes by the fire.

CS8591	COMPUTERNETWORKS	L	T	P	C
		3	0	0	3

OBJECTIVES:

- To understand the protocol layering and physical level communication.
- To analyze the performance of a network.
- To understand the various components required to build different networks.
- To learn the functions of network layer and the various routing protocols.
- To familiarize the functions and protocols of the Transport layer.

UNIT I INTRODUCTION AND PHYSICAL LAYER 9

Networks – Network Types – Protocol Layering – TCP/IP Protocol suite – OSI Model –Physical Layer: Performance – Transmission media – Switching – Circuit-switched Networks—Packet Switching.

UNIT II DATA-LINK LAYER & MEDIA ACCESS 9

Introduction–Link-Layer Addressing –DLC Services–Data-Link Layer Protocols –HDLC –PPP-MediaAccessControl-WiredLANs:Ethernet-WirelessLANs–Introduction–IEEE802.11,Bluetooth–ConnectingDevices.

UNIT III NETWORK LAYER 9

NetworkLayerServices–Packetswitching–Performance–IPV4Addresses–Forwardingof IP Packets - Network Layer Protocols: IP, ICMP v4 – Unicast Routing Algorithms – Protocols–MulticastingBasics–IPV6Addressing–IPV6Protocol.

UNITIV TRANSPORTLAYER 9

Introduction–TransportLayerProtocols–Services–PortNumbers–UserDatagramProtocol–TransmissionControlProtocol–SCTP.

UNITV APPLICATIONLAYER 9

WWW and HTTP–FTP–Email–Telnet–SSH–DNS–SNMP.

TOTAL: 45 PERIODS

OUTCOMES:

On Completion of the course, the students should be able to:

- Understand the basic layers and its functions in computer networks.
- Evaluate the performance of a network.
- Understand the basics of how data flows from one node to another.
- Analyze and design routing algorithms.
- Design protocols for various functions in the network.
- Understand the working of various application layer protocols.

TEXTBOOK:

1. Behrouz A. Forouzan, Data Communications and Networking, Fifth Edition TMH,2013.

REFERENCES

1. Larry L. Peterson, Bruce S. Davie, Computer Networks: A Systems Approach, Fifth Edition, Morgan Kaufmann Publishers Inc.,2012.
2. William Stallings, Data and Computer Communications, Tenth Edition, PearsonEducation,2013.
3. NaderF.Mir,ComputerandCommunicationNetworks,SecondEdition,Prentice Hall,2014.
4. Ying-Dar Lin, Ren-Hung Hwang and Fred Baker, Computer Networks: An OpenSourceApproach,McGrawHillPublisher,2011.
5. James F. Kurose, Keith W. Ross, Computer Networking, A Top-Down ApproachFeaturingthe Internet, SixthEdition,PearsonEducation,2013.

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QUALITY TESTING OF RICE GRAIN USING NEURAL NETWORK

A PROJECT REPORT

Submitted by

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B.MAHESHWARI (731218205007)

In partial fulfilment for the award of the degree

of

BACHELOR OF TECHNOLOGY

In

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BONAFIDE CERTIFICATE

Certified that this project report on **"QUALITY TESTING OF RICE GRAINS USING NEURAL NETWORK** "is the bonafide work of"**C.JOTHIKA(731218205004), B.MAHESHWARI(731218205007)**" who carried out the project work under my supervision.

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Submitted for Viva-Voce Examination held on 22/06/22 AN

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EXTERNAL EXAMINER

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ABSTRACT

The analysis of grain type, grading and their quality attributes is still done by skilled persons manually. This method leads to complexity because it depends on several factors like human factors, working conditions and the rate of cleaning and recovery of salvage. This maybe overcome by using image processing techniques. Testing on quality is gaining importance in food industry for classifying and grading the grains. Since manual testing is time consuming, costly and inaccurate, Quality testing of rice grains using neural network is preferred. In deep learning based testing, it take both physical grain shape and size and chemical characteristics amylose content, gel consistency for evaluation and grading of rice grains. In this proposed algorithm, quality and grading of rice grains were analysed using the average values of the features extracted from the network. The quality of rice depends on the rice varieties which decide the grade and cost of the rice. So the correct assessment of quality of rice is the important task. The analysis of grain type, grading and their quality attributes is still done by skilled persons manually. This method leads to complexity because it depends on several factors like human factors, working conditions and the rate of cleaning and recovery of salvage. This may be overcome by using image processing techniques. As the technology is growing wider people are adopting the new technologies rather than using the old techniques. The growth in technology is making people more demanding towards the things they use and consume, this is the reason why everything is becoming automated. The use of Image processing techniques for testing the quality of rice grains is inexpensive and is less time consuming. In this method, the quality of grain is tested based on its size and shape features.

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CHAPTER 1

INTRODUCTION

Rice is one of the most important and most used cereal grains of Pakistan as well as overall world. It is also most important for the human nutrition caloric intake. It generally provides 130 calories per 100 grams with 1% calcium, iron and 3% magnesium. It is the seed of grass specie Oryza sativa (Asian rice) and Oryza glaberrima (African rice) . Due to the blessed agro-climatic conditions, Pakistan is known for its production of three different types of rice which includes aromatic, medium and round grain rice. China, Pakistan, India, Indonesia and Vietnam are the main rice producing countries. It is the second staple food of Pakistan first being wheat. According to the latest ranking, Pakistan is ranked among top twenty producers of rice with the annual production of 9.935 million metric tons. It is also an important cash crop. Rice is the major cereal produced almost all areas in the entire world. India plays the vital role in the production of rice as it is the principle food of Indians and the Indian population is also growing at the rate of 1.2%.

It is grown on a majority of the rural farms. The quality of rice depends on the rice varieties which decide the grade and cost of the rice. So the correct assessment of quality of rice is the important task. The analysis of grain type, grading and their quality attributes is still done by skilled persons manually. This method leads to complexity because it depends on several factors like human factors, working conditions and the rate of cleaning and recovery of salvage. This may be overcome by using image processing techniques. As the technology is growing wider people are adopting the new technologies rather than using the old techniques. The growth in technology is making people more demanding towards the things they use and consume, this is the reason why everything is becoming automated. The use of Image processing techniques for

testing the quality of rice grains is inexpensive and is less time consuming. In this method, the quality of grain is tested based on its size and shape features.

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CHAPTER 7

CONCLUSION

In this research work, a simple, portable and efficient system is designed to analyze the quality and classify the different varieties of rice grains. Purpose of this research work is to help the industrialists to verify the quality of rice grains for import as well as export purposes. The whole system is implemented using neural network technique with segmentation method. In this project, a simple, portable and efficient system is designed to analyse the quality and classify the different varieties of rice grains. Purpose of this work is to help the industrialists to verify the quality of rice grains for import as well as export purposes. The whole system is implemented using neural network technique with classification method.

After conducted studies of seed culture classification with computer vision, it is possible to conclude that the computer vision technologies are appropriate for improving the process of seed classification in order to provide better grain crop purification processing. Here in this paper various feature extraction techniques and their various parameters are discussed. The project also presents the various application areas where feature extraction techniques are used. Hence on the basis of their advantages and their performance a new and efficient technique can be implemented in future and hence their applications can be used in various fields such as recognition, classification and matching. It is clear that CNN has higher accuracy for all the trained images in all type of the clusters thus by implementing the neural networks we can get much better results.

CS8792	CRYPTOGRAPHYANDNETWORKSECURITY	L	T	P	C
		3	0	0	3

OBJECTIVES:

- To understand Cryptography Theories, Algorithms and Systems.
- To understand necessary Approaches and Techniques to build protection mechanisms in order to secure computer networks.

UNITI INTRODUCTION 9

Securitytrends-Legal,EthicalandProfessionalAspectsofSecurity,NeedforSecurityatMultiple levels, Security Policies - Model of network security – Security attacks, services andmechanisms—OSIsecurityarchitecture—Classicalencryptiontechniques:substitution techniques, transposition techniques, steganography- Foundations of modern cryptography:perfectsecurity–informationtheory–productcryptosystem–cryptanalysis.

UNITII SYMMETRICKEYCRYPTOGRAPHY 9

MATHEMATICS OF SYMMETRIC KEY CRYPTOGRAPHY: Algebraic structures - Modulararithmetic-Euclid"s algorithm- Congruence and matrices -Groups, Rings, Fields-Finite fields-SYMMETRICKEYCIPHERS:SDES–Block cipher Principle of DES–Strength of DES – Differential and linear cryptanalysis - Block cipher design principles – Block ciphermode of operation – Evaluation criteria for AES – Advanced Encryption Standard - RC4 –Key distribution.

UNITIII PUBLICKEYCRYPTOGRAPHY 9

MATHEMATICSOFASYMMETRICKEYCRYPTOGRAPHY:Primes–PrimalityTesting–Factorization – Euler's totient function, Fermat's and Euler's Theorem - Chinese Remainder Theorem— Exponentiation and Alogarithm-ASYMMETRIC KEY CIPHERS:RSA cryptosystem – Key distribution – Key management – Diffie Hellman key exchange -ElGamalcryptosystem–Ellipticcurvearithmetic-Ellipticcurvecryptography.

UNITIV MESSAGEAUTHENTICATIONANDINTEGRITY 9

Authentication requirement – Authentication function – MAC – Hash function – Security ofhashfunctionandMAC–SHA–Digitalsignatureandauthenticationprotocols–DSS-EntityAuthentication: Biometrics, Passwords, Challenge Response protocols-Authenticationapplications-Kerberos,X.509

UNITV SECURITYPRACTICEANDSYSTEMSECURITY 9

ElectronicMailsecurity—PGP,S/MIME—IPsecurity—WebSecurity-

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SYSTEMSECURITY:Intruders–Maliciousssoftware–viruses–Firewalls.

TOTAL 45 PERIODS

OUTCOMES:

At the end of the course, the student should be able to:

- Understandthefundamentalsofnetworkssecurity,securityarchitecture,threatsandvulnerabilities
- Applythedifferentcryptographicoperationsofsymmetriccryptographicalgorithms
- Apply the different cryptographic operations of public key cryptography
- ApplythevariousAuthenticationschemestosimulatedifferentapplications.
- Understand various Security practices and System security standards

TEXTBOOK:

1. WilliamStallings,CryptographyandNetworkSecurity:PrinciplesandPractice,PHI3rdEditio n,2006.

REFERENCES:

1. C K Shyamala, N Harini and Dr. T R Padmanabhan: Cryptography and Network Security,Wiley IndiaPvt.Ltd
2. BehrouzA.Foruzan,CryptographyandNetworkSecurity,TataMcGrawHill2007.
3. CharlieKaufman,RadiaPerlman,andMikeSpeciner,NetworkSecurity:PRIVATECommun icationinaPUBLICWorld,PrenticeHall,ISBN0-13-046019-2

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IOT BASED AGRICULTURE MONITORING AND CONTROLLING SYSTEM USING ARDUINO UNO

A PROJECT REPORT

Submitted by

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PRASANTH K **(731218205013)**

In partial fulfillment for the award of the degree

of

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in

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BONAFIDE CERTIFICATE

Certified that this project report on **"IOT BASED AGRICULTURE MONITORING AND CONTROLLING SYSTEM USING ARDUINO UNO"** is the bonafide work of **"KARVANNAN K (731218205005), PRASANTH K (731218205013)"** who carried out the project work Under my supervision.

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ABSTRACT

Agriculture area unit controlled space surroundings to grow plants. so as to realize most plant growth, the continual watching and controlling of environmental parameters like temperature, humidity, soil moisture, intensity level, soil pH, etc. area unit necessary for a greenhouse system. The aim of this project is to style an easy, low cost, Arduino based mostly system to observe the values of environmental parameters which area unit endlessly updated and controlled so as to realize optimum plant growth and yield. The DHT11 sensing element, Soil wet sensing element, LDR sensing element, and pH scale sensing element is that the main sensors utilized in this project offer the precise price of temperature, humidity, water content, intensity level, and soil pH scale severally. All environmental parameters area unit sent to android mobile via offline and on-line. GSM (Global System for Mobile communication) electronic equipment is used to send SMS (Short Message Service) that displays the current standing of the environmental parameters. The SMS is distributed to the user once the sensing element value exceeds an outlined level. All farmers will control their agriculture from anywhere by knowing the standing of their greenhouse parameters at any time and that they will management actuators (cooling fan, fan, and motor pump) to regulate environmental parameters by causation SMS. WI-FI is additionally wont to send the information parameters to a mobile that eliminates the SMS charges through my MQTT app. All environmental parameters area units sent to server through WI-FI and hold on within the info. Therefore the user will monitor and management parameters through the android mobile application.

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CHAPTER 1

INTRODUCTION

In today's agriculture, observation and controlling of the many parameters square measure necessary for the great quality and productivity of plants. however to induce the specified resultsome parameters like temperature, humidity, soil wet, intensity level, and soil PH square measure necessary for higher plant growth. Therefore Arduino based mostly on greenhouse environment observation and controlling system mistreatment sensors are designed. For this project, the Arduino microcontroller is employed. Arduino will receive input from a range of sensors and it wills management motors, lights, and different actuators. Four sensors, DHT11 sensor, LDR sensor, Soil moisture sensor, and pH sensor square measure used. The DHT11 sensor is employed to live temperature and wetness. Soil wet device measures the water content within the soil. PH sensor measures the PH of the soil. A cooling fan, exhaust fan, and motor pump are connected to the Arduino. All environmental parameters square measure sent to automaton transportable via offline and online. A GSM modem and WI-FI square measure won't send environmental parameters to android mobile.

CHAPTER 7

CONCLUSION AND FUTURE ENHANCEMENT

CONCLUSION

An Arduino based mostly agriculture observance and controlling system is designed. DHT11 sensor, Soil moisture sensor, LDR sensor, and pH sensor is that the main sensors utilized in this project that provide the exact value of temperature, humidity, wetness content, intensity level, and soil pH severally. This technique is intended for controlling and observance environmental parameters in a very greenhouse by an easy SMS from anywhere via the GSM network. WI-FI is additionally wont to send the information parameters to the mobile that eliminates the SMS charges. This technique reduces power consumption, maintenance, and complexness. This project is often employed in the agricultural field, in a very nursery, and within the installation.

FUTURE ENHANCEMENT

In this manner we are increasing the system which able to control the agriculture monitoring in fields where the human being not capable to provide security. Such system we are developing in the field where the crops are costly are monitored and all the climatic conditions are well maintained important. In this area we are provide such kind of system.

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Gmail

Internship
1message

TUE 08 MAR 2022 at 2.30pm

From:HODIT<hodit@jkkmct.edu.in>
Date: TUE 08 MAR 2022 at 2.30pm
Subject:Internship -reg
To:SANSOFTWARE<sherinjames20@gmail.com>

Dear **Sir,**

I am requesting to be joining your **SAN SOFTWARE.**The requirements are exactly what I have prepared for and hoped to do. I feel confident that I can make a significant contribution to your organization while at the same time learning from your staff.

Additionally, I shall complete all insurance forms for the new intern orientation. I look forward to working with you and your fine team. I appreciate your confidence in me and providing the chance to work with and observe your outstanding staff.

Refer the following students:**(KARVANNAN.C,PRASANTH.K)**

Sincerely,

Final Year IT Students,
J K KMunirajah College of Technology,
T.N.Palayam,Erode-638506,Tamilnadu.

PRINCIPAL
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Gmail

Internship
1message

WED 09 MAR 2022 at 3.30pm

From: HODIT<hodit@jkkmct.edu.in>
Date: WED 09 MAR 2022 at 3.30pm
Subject:Internship-reg
To: SANGEETHKUMAR<sangeethkumarp@jkkmct.edu.in>

Dear **Sir,**

I am writing to confirm my acceptance of your internship offer of 16.03.2022 to 30.04.2022 and to tell you how to be joining my **SAN SOFTWARE**. The requirements are exactly what I have prepared for and hoped to do.I feel confident that I can make a significant contribution to your organization while at the same time learning from my staff.

As we discussed, I will report at 8:00 a.m. on **MARCH 13,2022** and will be ready to take on my first assignment as an intern from my company. Additionally, I shall complete all insurance forms for the new intern orientation. I look forward to working with you and your fine team. I appreciate your confidence in me and providing the chance to work with and observe my outstanding staff.

Refer the following students:**(KARVANNAN.C,PRASANTH.K)**

Sincerely,

HRManager,
SAN SOFTWARE SOLUTIONS PRIVATE LIMITED,
Coimbatore.

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Certificate

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Internship

This is to certify that Mr.PRASANTH.K Final year B.Tech.,Information Technology of JKK MUNIRAJAH COLLEGE OF TECHNOLOGY, Erode, has attended Internship training in our organization from March 16.03.2022 to April 30.04.2022.

During this Internship training, he has learned the overview concepts of IOT BASED AGRICULTURE CONTROLLING SYSTEM USING ARDUINO UNO.

For SAN SOFTWARE

Date : 30.04.2022

Authorised Signature

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Certificate

of

Internship

This is to certify that Mr.KARVANNAN.K Final year B.Tech.,Information Technology of JKK MUNIRAJAH COLLEGE OF TECHNOLOGY, Erode, has attended Internship training in our organization from March 16.03.2022 to April 30.04.2022.

During this Internship training, he has learned the overview concepts of IOT BASED AGRICULTURE CONTROLLING SYSTEM USING ARDUINO UNO.

For SAN SOFTWARE

Authorised Signature

Date : 30.04.2022

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CS8691 **ARTIFICIALINTELLIGENCE** L T P C

3 0 0 3

OBJECTIVES:

- To understand the various characteristics of Intelligent agents
- To learn the different search strategies in AI
- To learn to represent knowledge in solving AI problems
- To understand the different ways of designing software agents
- To know about the various applications of AI.

UNITI INTRODUCTION 9

Introduction–Definition-FutureofArtificialIntelligence–CharacteristicsofIntelligentAgents–TypicalIntelligentAgents–ProblemSolvingApproachtoTypicalAIproblems.

UNITII PROBLEMSOLVINGMETHODS 9

Problem solving Methods - Search Strategies- Uninformed - Informed - Heuristics - Local SearchAlgorithmsandOptimizationProblems-SearchingwithPartialObservations-ConstraintSatisfactionProblems—ConstraintPropagation-BacktrackingSearch-GamePlaying-Optimal Decisions in Games–Alpha-Beta Pruning-Stochastic Games

UNITIII KNOWLEDGEREPRESENTATION 9

First Order Predicate Logic – Prolog Programming – Unification – Forward Chaining-Backward Chaining – Resolution – Knowledge Representation - Ontological Engineering-Categories and Objects – Events - Mental Events and Mental Objects - Reasoning Systems for Categories -Reasoning with Default Information

UNITIV SOFTWAREAGENTS 9

ArchitectureforIntelligentAgents–Agentcommunication–NegotiationandBargaining–ArgumentationamongAgents–TrustandReputationinMulti-agentsystems.

UNITV APPLICATIONS 9

AI applications – Language Models – Information Retrieval- Information Extraction – Natural Language Processing - Machine Translation – Speech Recognition – Robot – Hardware – Perception—Planning—Moving

TOTAL:45PERIODS

OUTCOMES:

Up on completion of the course, the students will be able to:

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- Use appropriate search algorithms for any AI problem
- Represent a problem using first order and predicate logic
- Provide the apt agent strategy to solve a given problem
- Design software agents to solve a problem
- Design applications for NLP that use Artificial Intelligence.

TEXTBOOKS:

1 S.RussellandP.Norvig,"ArtificialIntelligence:AModernApproach‖,PrenticeHall,ThirdEdition,2009.

2 I.Bratko,—Prolog:ProgrammingforArtificialIntelligence‖,Fourthedition,Addison-WesleyEducationalPublishersInc.,2011.

REFERENCES:

1. M.TimJones,—ArtificialIntelligence:ASystemsApproach(ComputerScience)‖,JonesandBartlettPublishers,Inc.;FirstEdition,2008
2. NilsJ.Nilsson,—TheQuestforArtificialIntelligence‖,CambridgeUniversityPress,2009.
3. WilliamF.ClocksinandChristopherS.Mellish,‖ProgramminginProlog:UsingtheISOStandard‖,Fifth Edition,Springer,2003.
4. GerhardWeiss,—MultiAgentSystems‖, SecondEdition,MITPress,2013.
5. DavidL.PooleandAlanK.Mackworth,—ArtificialIntelligence:FoundationsofComputationalAgents‖,CambridgeUniversityPress,2010.

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CS8791 **CLOUDCOMPUTING** L TP C3003

OBJECTIVES:

- To understand the concept of cloud computing.
- To appreciate the evolution of cloud from the existing technologies.
- To have knowledge on the various issues in cloud computing.
- To be familiar with the lead players in cloud.
- To appreciate the emergence of cloud as the next generation computing paradigm.

UNITI INTRODUCTION 9

Introduction to Cloud Computing — Definition of Cloud — Evolution of Cloud Computing —UnderlyingPrinciplesofParallelandDistributedComputing–CloudCharacteristics– ElasticityinCloud–On-demandProvisioning.

UNITII CLOUDENABLINGTECHNOLOGIES 10

Service Oriented Architecture – REST and Systems of Systems – Web Services – Publish-Subscribe Model – Basics of Virtualization – Types of Virtualization – Implementation Levels of Virtualization – Virtualization Structures – Tools and Mechanisms – Virtualization of CPU –Memory–I/ODevices–Virtualization Supportand Disaster Recovery.

UNITIII CLOUDARCHITECTURE,SERVICESANDSTORAGE 8

Layered Cloud Architecture Design – NIST Cloud Computing Reference Architecture – Public,Private and Hybrid Clouds - laaS — PaaS — SaaS — Architectural Design Challenges — CloudStorage–Storage-as-a-Service–AdvantagesofCloudStorage–CloudStorageProviders– S3.

UNITIV RESOURCE MANAGEMENTAND SECURITYIN CLOUD 10

InterCloudResourceManagement–ResourceProvisioningandResourceProvisioningMethods – Global Exchange of Cloud Resources – Security Overview – Cloud Security Challenges – Software-as-a-Service Security – Security Governance – Virtual Machine Security – IAM –Security Standards.

UNITV CLOUDTECHNOLOGIESANDADVANCEMENTS 8

Hadoop– MapReduce – Virtual Box -- Google App Engine – Programming Environment for Google App Engine —— Open Stack — Federation in the Cloud — Four Levels of Federation –Federated Services and Applications–Future of Federation.

TOTAL:45PERIODS

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OUTCOMES:

On Completion of the course, the students should be able to:

- Articulatethemainconcepts,keytechnologies,strengthsandlimitationsofcloudcomputing.
- Learn the key and enabling technologies that help in the development of cloud.
- Developtheabilitytounderstandandusethearchitectureofcomputeandstoragecloud,serviceandd eliverymodels.
- Explain the core issues of cloud computing such as resource management and security.
- Be able to install and use current cloud technologies.
- Evaluateandchoosetheappropriatetechnologies,algorithmsandapproachesforimplementationa nduseofcloud.

TEXTBOOKS:

1. KaiHwang,GeoffreyC.Fox,JackG.Dongarra,"DistributedandCloudComputing,FromParallel Processingto theInternetofThings", MorganKaufmannPublishers,2012.
2. Rittinghouse,JohnW.,andJamesF.Ransome,—CloudComputing:Implementation,Managementan dSecurity‖,CRCPress,2017.

REFERENCES:

1. RajkumarBuyya,ChristianVecchiola,S.ThamaraiSelvi,—MasteringCloudComputing‖,TataMcgra wHill,2013.
2. TobyVelte,AnthonyVelte,RobertElsenpeter,"CloudComputing-APracticalApproach‖,TataMcgrawHill,2009.
3. GeorgeReese,"CloudApplicationArchitectures:BuildingApplicationsandInfrastructureintheCloud :TransactionalSystemsfor EC2andBeyond(Theory inPractice)‖,O'Reilly,2009.

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CRYPTO CURRENCY MARKET PREDICTION USING DEEP LEARNING

A PROJECT REPORT

Submitted by

N.MEENA (731218205009)

S.MONISHA (731218205011)

M.SUMATHI (731218205027)

in partial fulfillment for the award of the degree

of

BACHELOR OF TECHNOLOGY

in

INFORMATION TECHNOLOGY

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JUNE 2022

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BONAFIDE CERTIFICATE

Certified that this project report **"CRYPTO CURRENCY MARKET PREDICTION USING MACHINE LEARNING"** is the bonafide work of **"N.MEENA (731218205009), S.MONISHA (731218205011), M.SUMATHI (731218205027)"** who carried out the project work under my supervision.

SIGNATURE

Dr.N.SATHYABALAJI.M.E,M.I.S.T.E.,Ph.D.,
HEAD OF THE DEPARTMENT
Associate Professor
Dept. of Information Technology
J.K.K. Munirajah College of Technology
T.N. Palayam

21/6/22

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Mrs.R.KAVITHA, M.E.,
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Assistant Professor
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T.N. Palayam

Submitted for the Viva-Voce examination held on 22/6/22 (AN)

22/6/22

INTERNAL EXAMINER

EXTERNAL EXAMINER

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ABSTRACT

Deep learning and AI-assisted trading have attracted growing interest for the past few years. Here,we use this approach to test the hypothesis that the inefficiency of the crypto currency market can be exploited to generate abnormal profits. We analyze daily data for 1, 681 crypto currencies for the period between Nov.2015 and Apr. 2018. We show that simple trading strategies assisted by state of the art deep learning algorithms outperform standard benchmarks. Our results show that non-trivial, but ultimately simple, algorithmic mechanisms can help anticipate the short term evolution of the crypto currency market.Crypto currency such as Bitcoin is more popular these days among investors.

It is studied to forecast the Bitcoin price precisely considering different parameters that influence the Bitcoin price. This study first handles, it is identified the price trend on day by day changes in the Bitcoin price while it gives knowledge about Bitcoin price trends. The dataset till current date is taken with open, high, low and close price details of Bitcoin value. Exploiting the dataset deep learning module is introduced for prediction of price values. The aim of this work is to derive the accuracy of Bitcoin prediction using different deep learning algorithm and compare their accuracy. Experiment results are compared for decision tree and regression model.

Bitcoin is a one of the crypto currency which is utilized worldwide for computerized investment. Bitcoin is decentralized for example it isn't possessed by anybody. Trades made by Bitcoins are simple as they are not fixing to any nation. Investment is possible through different commercial centers known as bitcoin trades. These enable individuals to trade on Bitcoins utilizing various currencies.

CHAPTER 1

INTRODUCTION

Bitcoin is a crypto currency which is used worldwide for digital payment or simply for investment purposes. Bitcoin is decentralized i.e. it is not owned by anyone. Transactions made by Bitcoins are easy as they are not tied to any country. Investment can be done through various marketplaces known as "bitcoin exchanges". These allow people to sell/buy Bitcoins using different currencies. The largest Bitcoin exchange is Mt Gox. Bitcoins are stored in a digital wallet which is basically like a virtual bank account. The record of all the transactions, the timestamp data is stored in a place called Block chain. Each record in a block chain is called a block. Each block contains a pointer to a previous block of data. The data on block chain is encrypted. During transactions the user's name is not revealed, but only their wallet ID is made public.

The Bitcoins value varies just like a stock albeit differently. There are a number of algorithms used on stock market data for price prediction. However, the parameters affecting Bitcoin are different. Therefore it is necessary to predict the value of Bitcoin so that correct investment decisions can be made.

The price of Bitcoin does not depend on the business events or intervening government unlike stock market. Thus, to predict the value we feel it is necessary to leverage machine learning technology to predict the price of Bitcoin and currently there are few prediction models available. The crypto currency is a new technology.

1.1 DOMAIN OVERVIEW

DEEP LEARNING

Deep Learning, is a more evolved branch of machine learning, and uses layers of algorithms to process data, and imitate the thinking process, or to develop abstractions.

CHAPTER 10
CONCLUSION AND FUTURE WORK

10.1 CONCLUSION

Deep Learning models such as the RNN and LSTM are evidently effectively learners on training data with the LSTM more capable for recognizing longer term dependencies. However, a high variance task of this nature makes it difficult to transpire this into impressive validation results. As a result it remains a difficult task. There is a fine line to balance between over fitting a model and preventing it from learning sufficiently. After establishing the learning framework and completing the normalization, intend to use the two methods mentioned above and choose the best method to solve the bitcoin prediction problem. In terms of the dataset, based on an analysis of the weights of the model the difficulty and hash rate variables could be considered for pruning. Machine learning models require a significant amount to data to learn effectively from. The dataset utilized contained 1066 time steps representing each day. If the granularity of data was changed to per minute this would provide 512,640 data points in a year. Data of this nature is not available for the past but is currently being gathered from coin desk on a daily basis for future use.

10.2 FUTURE WORK

In this future work will extend our algorithmic rule by together with text mining methods for analyzing the content of comments on social networks sites and determine the patterns and relationship between corporate/consumer communication and companies stock worth. Finally, we tend to conclude that its possible to use computation ways like algorithms and data mining techniques to explore a corporation communication patterns And utilize such patterns to predict a corporations structure performation like stock performance.

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- To understand the various characteristics of Intelligent agents
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- To understand the different ways of designing software agents
- To know about the various applications of AI.

UNITI INTRODUCTION 9

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UNITV APPLICATIONS 9

AI applications – Language Models – Information Retrieval- Information Extraction – Natural Language Processing - Machine Translation – Speech Recognition – Robot – Hardware – Perception—Planning—Moving

TOTAL:45PERIODS

OUTCOMES:

Up on completion of the course, the students will be able to:

- Use appropriate search algorithms for any AI problem
- Represent a problem using first order and predicate logic
- Provide the apt agent strategy to solve a given problem
- Design software agents to solve a problem
- Design applications for NLP that use Artificial Intelligence.

TEXTBOOKS:

1 S.RussellandP.Norvig,"ArtificialIntelligence:AModernApproach‖,PrenticeHall,ThirdEdition,2009.

2 I.Bratko,—Prolog:ProgrammingforArtificialIntelligence‖,Fourthedition,Addison-WesleyEducationalPublishersInc.,2011.

REFERENCES:

1. M.TimJones,—ArtificialIntelligence:ASystemsApproach(ComputerScience)‖,JonesandBartlettPublishers,Inc.;FirstEdition,2008
2. NilsJ.Nilsson,—TheQuestforArtificialIntelligence‖,CambridgeUniversityPress,2009.
3. WilliamF.ClocksinandChristopherS.Mellish,‖ProgramminginProlog:UsingtheISOStandard‖,Fifth Edition,Springer,2003.
4. GerhardWeiss,—MultiAgentSystems‖, SecondEdition,MITPress,2013.
5. DavidL.PooleandAlanK.Mackworth,—ArtificialIntelligence:FoundationsofComputationalAgents‖,CambridgeUniversityPress,2010.

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MACHINE LEARNING BASED MODEL FOR CROP YIELD PREDICTION

A PROJECT REPORT

Submitted by

S.PRABHAKARAN **(731218205012)**

M.PRASANTH **(731218205014)**

in partial fulfillment for the award of the degree

Of

BACHELOR OF TECHNOLOGY

in

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JUNE 2022

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BONAFIDE CERTIFICATE

Certified that this project report on **"MACHINE LEARNING BASED MODEL FOR CROP YIELD PREDICTION"** is the bonafide work of **"S.PRABHAKARAN (731218205012), M.PRASANTH (731218205014)"** who carried out the project work under my supervision.

SIGNATURE

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Associate Professor
Dept.of Information Technology
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Dr.N.SATHYABALAJI.M.E.M.I.S.T.E.Ph.D.,
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Submitted for the Viva-Voce examination held on 22-06-2022 / AN

22/6/22
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ABSTRACT

Our country's economy is mainly based on agriculture. Farmers play an important role in agriculture. At present scenario due to variation in climatic change and other price influencing parameters farmers face massive loss due to uncertainties in the price prediction .Price Prediction, nowadays, has become a very important agricultural problem which is to be solved only based on the available data. In general with help of this application farmers get a beforehand prediction which helps to increase their profit and prevent massive loss. It increases the country's economy. Agriculture is one of the major revenue producing sectors of India and a source of survival. Numerous seasonal, economic and biological patterns influence the crop production but unpredictable changes in these patterns lead to a great loss to farmers. These risks can be reduced when suitable approaches are employed on data related to soil type, temperature, atmospheric pressure, humidity and crop type. Whereas, crop and weather forecasting can be predicted by deriving useful insights from these agricultural data that aids farmers to decide on the crop they would like to plant for the forthcoming year leading to maximum profit. This presents a survey on the various algorithms used for weather, crop yield, and crop cost prediction.

CHAPTER 8

CONCLUSION AND FUTURE SCOPE

CONCLUSION

The research aims at predicting the price and forecast through backend plication and it is runs on efficient machine learning algorithms and technologies ving a good accuracy. The training datasets so obtained provide the enough sights for predicting the appropriate price and demand in the markets. Thus, the ystem helps the farmers in reducing their difficulties and stops them by attempting uicides.

8.2 FUTURE SCOPE

Crop yield prediction is the ability of the algorithm. In future we can determine the efficient web enhancement or application based on their accuracy metrics that will helps to choose an efficient algorithm for crop yield prediction.

CHAPTER 1

INTRODUCTION

Agriculture is the main pillar of the economy in our country. Most of the families rely on Agriculture. Country's Gross Development predominantly learns on Agriculture. 60%of the land is utilized for Agriculture to adequate the requirements of the Country's population. It uses Machine Learning techniques on various data to come out with better solutions. This solution uses Support Vector Regression technique to predict the crop value using the data trained from authenticated dataset. By this application productivity can be increased by understanding and Forecasting croppers for acne in a variety of environmental conditions. An effective Crop price forecasting system can give out possibilities for customers which can satisfy the customers to a greater context. Finally, the results are displayed as web applications so that poor farmers can access them easily. The proposed system applies machine learning and prediction algorithm like Logistic Regression, Decision Trees, this in turn will help predict the target price of the crop.

1.1 DOMAIN SPECIFICATION

MACHINE LEARNING

Machine Learning is a system that can learn from example through self-improvement and without being explicitly coded by programmer. The break through comes with the idea that a machine can singularly learn from the data (i.e., example) to produce accurate results. Machine learning combines data with statistical tools to predict an output. This output is then used by corporate to makes actionable insights. Machine learning is closely related to data mining and Bayesian predictive modeling.

Gmail

Internship
1message

TUE 08 MAR 2022 at1.30pm

From: HODIT<hodit@jkkmct.edu.in>
Date: TUE 08 MAR 2022 at 1.30pm
Subject:Internship -reg
To:PANTECH<rithiksam22@pantech.com>

Dear **Sir,**

I am requesting to be joining your **PAN TECH.**The requirements are exactly what I have prepared for and hoped to do. I feel confident that I can make a significant contribution to your organization while at the same time learning from your staff.

Additionally, I shall complete all insurance forms for the new intern orientation. I look forward to working with you and your fine team. I appreciate your confidence in me and providing the chance to work with and observe your outstanding staff.

Refer the following students:**(PRABHAKARAN.S,PRASANTH.M)**

Sincerely,

Final Year IT Students,
J K KMunirajah College of Technology,
T.N.Palayam,Erode-638506,Tamilnadu.

PRINCIPAL
JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

Gmail

Internship
1message

WED 09 MAR 2022 at 3.30pm

From: PANTECH<rithiksam22@pantech.com>

Date: WED 09 MAR 2022 at 3.30pm

Subject:Internship-reg

To: HODIT<hodit@jkkmct.edu.in>

Dear **Sir,**

I am writing to confirm my acceptance of your internship offer of 16.03.2022 to 30.04.2022 and to tell you how to be joining my **PAN TECH**. The requirements are exactly what I have prepared for and hoped to do.I feel confident that I can make a significant contribution to your organization while at the same time learning from my staff.

As we discussed, I will report at 9:00 a.m. on **MARCH 13,2022** and will be ready to take on my first assignment as an intern from my company. Additionally, I shall complete all insurance forms for the new intern orientation. I look forward to working with you and your fine team. I appreciate your confidence in me and providing the chance to work with and observe my outstanding staff.

Refer the following students:**(PRABHAKARAN.S,PRASANTH.M)**

Sincerely,

HRManager,
PAN TECH SOLUTIONS PRIVATE LIMITED,
Coimbatore.

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PANTECH SOLUTIONS®

Technology Beyond The Dreams

Certificate of Internship

This is to certify that Mr.PRABHAKARAN.S Final year B.E., Computer Science and Engineering of JKK MUNIRAJAH COLLEGE OF TECHNOLOGY, Erode,has attended Internship training in our organization from March 16.03.2022 to April 30.04.2022.

During this Internship training, he has learned the overview concepts of MACHINE LEARNING BASED MODEL FOR CROP YIELD PREDICTION.

Date : 30.04.2022

Authorised Signature

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GOBI (Tk), ERODE (Dt).

PANTECH SOLUTIONS®

Technology Beyond The Dreams

Certificate of Internship

This is to certify that Mr.PRASANTH.M Final year B.E., Computer Science and Engineering of JKK MUNIRAJAH COLLEGE OF TECHNOLOGY, Erode,has attended Internship training in our organization from March 16.03.2022 to April 30.04.2022.

During this Internship training, he has learned the overview concepts of IOT BASED EMISSION MONITORING SYSTEM IN VEHICLE USING NODEMCU.

Date : 30.04.2022

Authorised Signature

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OF TECHNOLOGY
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CS8591 **COMPUTERNETWORKS** L T P C

3 0 0 3

OBJECTIVES:

- To understand the protocol layering and physical level communication.
- To analyze the performance of a network.
- To understand the various components required to build different networks.
- To learn the functions of network layer and the various routing protocols.
- To familiarize the functions and protocols of the Transport layer.

UNIT I INTRODUCTION AND PHYSICAL LAYER 9

Networks — Network Types — Protocol Layering — TCP/IP Protocol suite — OSI Model —Physical Layer: Performance – Transmission media – Switching – Circuit-switched Networks—Packet Switching.

UNIT II DATA-LINK LAYER & MEDIA ACCESS 9

Introduction–Link-Layer Addressing –DLC Services–Data-Link Layer Protocols –HDLC –PPP-MediaAccessControl-WiredLANs:Ethernet-WirelessLANs–Introduction–IEEE802.11,Bluetooth–ConnectingDevices.

UNIT III NETWORK LAYER 9

NetworkLayerServices–Packetswitching–Performance–IPV4Addresses–Forwardingof IP Packets - Network Layer Protocols: IP, ICMP v4 – Unicast Routing Algorithms – Protocols–MulticastingBasics–IPV6Addressing–IPV6Protocol.

UNITIV TRANSPORTLAYER 9

Introduction–TransportLayerProtocols–Services–PortNumbers–UserDatagramProtocol–TransmissionControlProtocol–SCTP.

UNITV APPLICATIONLAYER 9

WWW and HTTP–FTP–Email–Telnet–SSH–DNS–SNMP.

TOTAL: 45 PERIODS

OUTCOMES:

On Completion of the course, the students should be able to:

- Understand the basic layers and its functions in computer networks.
- Evaluate the performance of a network.
- Understand the basics of how data flows from one node to another.
- Analyze and design routing algorithms.
- Design protocols for various functions in the network.
- Understand the working of various application layer protocols.

TEXTBOOK:

1. Behrouz A. Forouzan, Data Communications and Networking, Fifth Edition TMH,2013.

REFERENCES

1. Larry L. Peterson, Bruce S. Davie, Computer Networks: A Systems Approach, Fifth Edition, Morgan Kaufmann Publishers Inc.,2012.
2. William Stallings, Data and Computer Communications, Tenth Edition, PearsonEducation,2013.
3. NaderF.Mir,ComputerandCommunicationNetworks,SecondEdition,Prentice Hall,2014.
4. Ying-Dar Lin, Ren-Hung Hwang and Fred Baker, Computer Networks: An OpenSourceApproach,McGrawHillPublisher,2011.
5. James F. Kurose, Keith W. Ross, Computer Networking, A Top-Down ApproachFeaturingthe Internet, SixthEdition,PearsonEducation,2013.

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IOT BASED SMART WASTE MANAGEMENT SYSTEM USING NODE MCU ESP8266

A PROJECT REPORT

Submitted by

S.RANJITHA (731218205019)

A.SOWNDARYA (731218205026)

in partial fulfillment for the award of the degree

of

BACHELOR OF TECHNOLOGY

in

INFORMATION TECHNOLOGY

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JUNE 2022

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T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

BONAFIDE CERTIFICATE

Certified that this project report on **"IOT BASED SMART WASTE MANAGEMENT SYSTEM USING NODE MCU ESP8266"** is the bonafide work of **"S.RANJITHA (731218205019), A.SOWNDARYA (731218205026)"** who Carried out the project work under my supervision.

20/6/22

SIGNATURE

Dr.N.SATHYABALAJI.M.E. M.I.S.T.E. Ph.D

HEAD OF THE DEPARTMENT

Associate Professor

Dept. of Information Technology

J.K.K.Munirajah College of Technology

T.N.Palayam

20/6/22

SIGNATURE

Mrs.D.NIVETHINI.M.Tech

SUPERVISOR

Assistant Professor

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T.N.Palayam

Submitted for the Viva-Voce examination held on 22/06/22 /AN

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INTERNAL EXAMINER

EXTERNAL EXAMINER

PRINCIPAL
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ABSTRACT

A system is introduced to manage waste in big cities effectively without having to monitor the parts 24×7 manually. Here the problem of unorganized and non-systematic waste collection is solved by designing an embedded IOT system that will monitor each dumpster individually for the amount of waste deposited. Here an automated system is provided for segregating wet and dry waste. A mechanical setup can be used for separating the wet and dry waste into separate containers here sensors can be used for separating wet and dry. For detecting the presence of any waste wet or dry can be detected using an IR sensor in the next step for detecting wet waste a moister sensor can be used. In this process, if only IR is detected motor will rotate in the direction of the dry waste container if both the sensor detects the waste then it will go to the wet container. Both these containers are embedded with ultrasonic sensors at the top, the ultrasonic sensor is used for measuring distance. This makes it possible to measure the amount of waste in the containers that data is uploaded to thing speak.

CHAPTER 1

INTRODUCTION

Today big cities around the world are facing a common problem, managing the city waste effectively without making city unclean. Today's waste management systems involve a large number of employees being appointed to attend a certain number of dumpsters this is done every day periodically. This leads to a very inefficient and unclean system in which some dumpsters will be overflowing some dumpsters might not be even half full. This is caused by variation in population density in the city or some other random factor this makes it impossible to determine which part needs immediate attention. Here a waste management system is introduced in which each dumpster is embedded in a monitoring system. In this system, it is also possible to separate wet and dry waste into two separate containers. This system provides an effective solution to the waste management problem.

The amount of waste produced everyday by the industries and the households is increasing at an appalling rate, and the major reason for this is soaring use of packaged items, textiles, paper, food, plastics, metals, glass etc, thus management of this refuse becomes a crucial part in our everyday life. In most of the developed countries there are many efficient techniques which are used for the proper management of this waste, but in some countries especially the developing ones the careless attitude of people towards maintaining clean surroundings, along with this many issues such as no stringent laws for using the biodegradable materials, no proper environ policies, no laws for sustainable development are the seed for the fatal results of waste management. Due to the increasing waste, the public bins which are used for collecting this waste are overflowing; the locality is jumbled of trash, causing not only malodorous streets but also a negative impact on the health and environment. Waste is a crucial issue, which needs to be addressed smartly. We segregate the waste at our homes for ease at processing and recycling. We observed trash vans come irregular to homes creating a despoliation of households. Due to this many civilians empty their overloaded dustbins in open

paces. This in turn increases environmental pollution the waste is a great hassle for ur health and the environment it has many effects which are dreadful. Trash is reeding ground for bacteria, insects, flies these flies are the same that roam around ıe eatable and drop them off springs.

Disposal of hazardous waste like the electronic items, plastics in water ffect the aquatic life and indirectly the human beings. Overflowing garbage is also a ublic hassle and eyesore. A malodorous city with trash all around the place does ot attract tourist thus loosing the money revenue and the opportunities. As rosperity grows, 62 million tons of garbage is generated everyday by the 377 ıillion people living in urban India, now the world's third largest garbage generator. Iowever, it's not the amount of waste generated that's as much of an issue as the act that more than 45 million tons, or 3 million trucks worth, of garbage is untreated nd disposed of by municipal authorities every day in an unhygienic manner.

It is very salient issue to deal and discover the proper remedies for it some ıf them are like government should enact stringent laws against the people throwing rash, against the industries for not using biodegradable material, more use of recycle tems, reduce the use of non-degradable stuff, reuse the items, thus implementing his can reduce the waste up to some extent. The internet nowadays has the world ınder its spell. Not a single person lives without internet, phone, tab or laptop. It is ɔelieved without connectivity u cannot move ahead in today's world but sometimes lue to heavy plans or connectivity issues we can't access to the internet, and thus ıttracting people towards free Wi-Fi. Providing free Wi-Fi facility for dumping waste into the dustbin would solve the issue of waste and the internet facility plus availability of free service would help people go crazy and would act as reward for maintain cleanliness in the locality.

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CONCLUSION & FUTURE ENHANCEMENT

CONCLUSION

This is very effective in managing waste in any big city. Rather than using conventional periodic collection methods here priority system is used to the city is clean all the time without any overflowing dumpsters. It has been tested and verified properly to make sure all the different parts work together for a smooth function of the whole system.

FUTURE ENHANCEMENT

The same implementation was tested in Node MCU and it works well, but Raspberry Pi also has an extensive imaging library, so it can also be used for the same applications. In addition, compared to other controllers, the extra memory used to store all recorded videos/images on the Raspberry I. During the operation of the system, data can be called from the cloud at any time. This data can be used to predict and calibrate systems running various machine learning algorithms and predict the usage of the container at a specific date and time. This will help the respected department predict containers and help road transportation for early cleaning. A smart and organized system is designed for selective clearing the ultrasonic sensor is used for measuring the level of waste in the dustbin, DC motor powered platform is used for segregating wet and dry waste, IR sensor and moisture sensor is used for separating wet and dry waste. If either of the containers is full then an alert message is sent from the dustbin to employess and the cloud. In turn, employees can clear the corresponding dumpster.

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Gmail

Internship
1message

TUE 08 MAR 2022 at 2.30pm

From: HODIT<hodit@jkkmct.edu.in>
Date: TUE 08 MAR 2022 at 2.30pm
Subject:Internship -reg
To:SANSOFTWARE<sherinjames20@gmail.com>

Dear **Sir,**

I am requesting to be joining your **SAN SOFTWARE.**The requirements are exactly what I have prepared for and hoped to do. I feel confident that I can make a significant contribution to your organization while at the same time learning from your staff.

Additionally, I shall complete all insurance forms for the new intern orientation. I look forward to working with you and your fine team. I appreciate your confidence in me and providing the chance to work with and observe your outstanding staff.

Refer the following students:**(RANJITHA.R,SOUNDARYA.A)**

Sincerely,

Final Year IT Students,
J K KMunirajah College of Technology,
T.N.Palayam,Erode-638506,Tamilnadu.

PRINCIPAL
JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

Gmail

Internship
1message

WED 09 MAR 2022 at 3.30pm

From: SANSOFTWARE<sherinjames20@gmail.com>

Date: WED 09 MAR 2022 at 3.30pm

Subject:Internship-reg

To: HODIT<hodit@jkkmct.edu.in>

Dear **Sir,**

I am writing to confirm my acceptance of your internship offer of 16.03.2022 to 30.04.2022 and to tell you how to be joining my **SAN SOFTWARE**. The requirements are exactly what I have prepared for and hoped to do.I feel confident that I can make a significant contribution to your organization while at the same time learning from my staff.

As we discussed, I will report at 8:00 a.m. on **MARCH 13,2022** and will be ready to take on my first assignment as an intern from my company. Additionally, I shall complete all insurance forms for the new intern orientation. I look forward to working with you and your fine team. I appreciate your confidence in me and providing the chance to work with and observe my outstanding staff.

Refer the following students:**(RANJITHA.R,SOUNDARYA.)**

Sincerely,

HRManager,
SAN SOFTWARE SOLUTIONS PRIVATE LIMITED,
Coimbatore.

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JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (PO)-638 506.
GOBI (TK), ERODE (DT).

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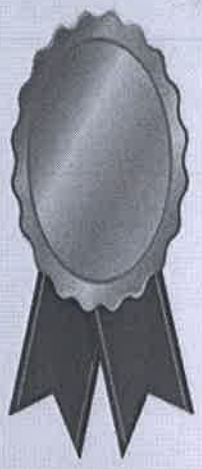

This is to certify that Mr.SOWNDARYA.A Final year B.Tech.,Information Technology of JKK MUNIRAJAH COLLEGE OF TECHNOLOGY, Erode, has attended Internship training in our organization from March 16.03.2022 to April 30.04.2022.

During this Internship training, he has learned the overview concepts of IOT BASED AGRICULTURE CONTROLLING SYSTEM USING ARDUINO UNO.

For SAN SOFTWARE

Authorised Signature

Date : 30.04.2022

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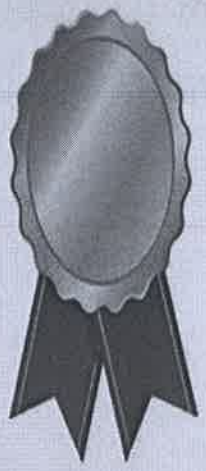

This is to certify that Mr.RANJITH.R Final year B.Tech.,Information Technology of JKK MUNIRAJAH COLLEGE OF TECHNOLOGY, Erode, has attended Internship training in our organization from March 16.03.2022 to April 30.04.2022.

During this Internship training, he has learned the overview concepts of IOT BASED AGRICULTURE CONTROLLING SYSTEM USING ARDUINO UNO.

For SAN SOFTWARE

Date : 30.04.2022

Authorised Signature

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CS8791 **CLOUDCOMPUTING** L TP C3003

OBJECTIVES:

- To understand the concept of cloud computing.
- To appreciate the evolution of cloud from the existing technologies.
- To have knowledge on the various issues in cloud computing.
- To be familiar with the lead players in cloud.
- To appreciate the emergence of cloud as the next generation computing paradigm.

UNITI INTRODUCTION 9

Introduction to Cloud Computing — Definition of Cloud — Evolution of Cloud Computing —UnderlyingPrinciplesofParallelandDistributedComputing–CloudCharacteristics– ElasticityinCloud—On-demandProvisioning.

UNITII CLOUDENABLINGTECHNOLOGIES 10

Service Oriented Architecture – REST and Systems of Systems – Web Services – Publish-Subscribe Model – Basics of Virtualization – Types of Virtualization – Implementation Levels of Virtualization — Virtualization Structures — Tools and Mechanisms — Virtualization of CPU –Memory–I/ODevices–Virtualization Supportand Disaster Recovery.

UNITIII CLOUDARCHITECTURE,SERVICESANDSTORAGE 8

Layered Cloud Architecture Design – NIST Cloud Computing Reference Architecture – Public,Private and Hybrid Clouds - laaS — PaaS — SaaS — Architectural Design Challenges — CloudStorage–Storage-as-a-Service–AdvantagesofCloudStorage–CloudStorageProviders– S3.

UNITIV RESOURCE MANAGEMENTAND SECURITYIN CLOUD 10

InterCloudResourceManagement–ResourceProvisioningandResourceProvisioningMethods – Global Exchange of Cloud Resources – Security Overview – Cloud Security Challenges – Software-as-a-Service Security – Security Governance – Virtual Machine Security – IAM –Security Standards.

UNITV CLOUDTECHNOLOGIESANDADVANCEMENTS 8

Hadoop– MapReduce – Virtual Box -- Google App Engine – Programming Environment for Google App Engine —– Open Stack — Federation in the Cloud — Four Levels of Federation –Federated Services and Applications–Future of Federation.

TOTAL:45PERIODS

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OUTCOMES:

On Completion of the course, the students should be able to:

- Articulatethemainconcepts,keytechnologies,strengthsandlimitationsofcloudcomputing.
- Learn the key and enabling technologies that help in the development of cloud.
- Developtheabilitytounderstandandusethearchitectureofcomputeandstoragecloud,serviceandd eliverymodels.
- Explain the core issues of cloud computing such as resource management and security.
- Be able to install and use current cloud technologies.
- Evaluateandchoosetheappropriatetechnologies,algorithmsandapproachesforimplementationa nduseofcloud.

TEXTBOOKS:

1. KaiHwang,GeoffreyC.Fox,JackG.Dongarra,"DistributedandCloudComputing,FromParallel Processingto theInternetofThings", MorganKaufmannPublishers,2012.
2. Rittinghouse,JohnW.,andJamesF.Ransome,—CloudComputing:Implementation,Managementan dSecurity‖,CRCPress,2017.

REFERENCES:

1. RajkumarBuyya,ChristianVecchiola,S.ThamaraiSelvi,—MasteringCloudComputing‖,TataMcgra wHill,2013.
2. TobyVelte,AnthonyVelte,RobertElsenpeter,"CloudComputing-APracticalApproach‖,TataMcgrawHill,2009.
3. GeorgeReese,"CloudApplicationArchitectures:BuildingApplicationsandInfrastructureintheCloud :TransactionalSystemsfor EC2andBeyond(Theory inPractice)‖,O'Reilly,2009.

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CS8691 **ARTIFICIALINTELLIGENCE** L T P C

3 0 0 3

OBJECTIVES:

- To understand the various characteristics of Intelligent agents
- To learn the different search strategies in AI
- To learn to represent knowledge in solving AI problems
- To understand the different ways of designing software agents
- To know about the various applications of AI.

UNITI INTRODUCTION 9

Introduction–Definition-FutureofArtificialIntelligence–CharacteristicsofIntelligentAgents–TypicalIntelligentAgents–ProblemSolvingApproachtoTypicalAIproblems.

UNITII PROBLEMSOLVINGMETHODS 9

Problem solving Methods - Search Strategies- Uninformed - Informed - Heuristics - Local SearchAlgorithmsandOptimizationProblems-SearchingwithPartialObservations-ConstraintSatisfactionProblems–ConstraintPropagation-BacktrackingSearch-GamePlaying-Optimal Decisions in Games–Alpha-Beta Pruning-Stochastic Games

UNITIII KNOWLEDGEREPRESENTATION 9

First Order Predicate Logic – Prolog Programming – Unification – Forward Chaining-Backward Chaining – Resolution – Knowledge Representation - Ontological Engineering-Categories and Objects – Events - Mental Events and Mental Objects - Reasoning Systems for Categories -Reasoning with Default Information

UNITIV SOFTWAREAGENTS 9

ArchitectureforIntelligentAgents–Agentcommunication–NegotiationandBargaining–ArgumentationamongAgents–TrustandReputationinMulti-agentsystems.

UNITV APPLICATIONS 9

AI applications – Language Models – Information Retrieval- Information Extraction – Natural Language Processing - Machine Translation – Speech Recognition – Robot – Hardware – Perception–Planning–Moving

TOTAL:45PERIODS

OUTCOMES:

Up on completion of the course, the students will be able to:

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- Use appropriate search algorithms for any AI problem
- Represent a problem using first order and predicate logic
- Provide the apt agent strategy to solve a given problem
- Design software agents to solve a problem
- Design applications for NLP that use Artificial Intelligence.

TEXTBOOKS:

1 S.RussellandP.Norvig,"ArtificialIntelligence:AModernApproachǁ,PrenticeHall,ThirdEdition,2009.

2 I.Bratko,—Prolog:ProgrammingforArtificialIntelligenceǁ,Fourthedition,Addison-WesleyEducationalPublishersInc.,2011.

REFERENCES:

1. M.TimJones,—ArtificialIntelligence:ASystemsApproach(ComputerScience)ǁ,JonesandBartlettPublishers,Inc.;FirstEdition,2008
2. NilsJ.Nilsson,—TheQuestforArtificialIntelligenceǁ,CambridgeUniversityPress,2009.
3. WilliamF.ClocksinandChristopherS.Mellish,ǁProgramminginProlog:UsingtheISOStandardǁ,Fifth Edition,Springer,2003.
4. GerhardWeiss,—MultiAgentSystemsǁ, SecondEdition,MITPress,2013.
5. DavidL.PooleandAlanK.Mackworth,—ArtificialIntelligence:FoundationsofComputationalAgentsǁ,CambridgeUniversityPress,2010.

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SKIN CANCER DETECTION USING DEEP LEARNING

A PROJECT REPORT

Submitted by

REKA N **(731218205020)**

SANMUGAPRIYA R **(731218205023)**

in partial fulfillment forth award of the degree

of

BACHELOR OF TECHNOLOGY

in

INFORMATION TECHNOLOGY

J.K.K. MUNIRAJAH COLLEGE OF TECHNOLOGY

T.N.PALAYM, GOBI-638506

ANNAUNIVERSITY::CHENNAI 600025

JUNE 2022

PRINCIPAL
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GOBI (Tk), ERODE (Dt).

ANNA UNIVERSITY:CHENNAI600025

BONAFIDE CERTIFICATE

Certified that this project report on **"SKIN CANCER DETECTION USING DEEP LEARNING"** is the bonafide work of **"N.REKA(731218205020), R.SANMUGAPRIYA (731218205023)"** who carried out the project work under my supervision.

SIGNATURE

Dr.N.SATHYABALAJI. M.E. M.I.S.T.E.Ph.D

HEAD OF THE DEPARTMENT

Associate Professor

Dept of Information Technology

J.K.K.Munirajah College of Technology

T.N.Palayam

SIGNATURE

Mrs. R.KAVITHA .M.E

SUPERVISOR

Assistant Professor

Dept of Information Technology

J.K.K.Munirajah College of Technology

T.N.Palayam

Submitted for the Viva- Voice examination held on 22.06.22 AN

INTERNAL EXAMINER

EXTERNAL EXAMINER

PRINCIPAL
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T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

ABSTRACT

Human Cancer is one of the most dangerous disease which is mainly caused by genetic instability of multiple molecular alterations. Among many forms of human cancer, skin cancer is the most common one. To identify skin cancer at an early stage it will study and analyze them through various techniques named as segmentation and feature extraction. Here, it focus malignant melanoma skin cancer, (due to the high concentration of Melanoma Hier it offer our skin, in the dermis layer of the skin) detection. It used our ABCD rule dermoscopy technology for malignant melanoma skin cancer detection. In this system different step for melanoma skin lesion characterization, first the Image Acquisition Technique, pre-processing, segmentation, define feature for skin Feature Selection determines lesion characterization, classification methods. In the Feature extraction by digital image processing method includes, symmetry detection, Border Detection, color, and diameter detection and also it used LBP for extract the texture based features. Here it proposed the Back Propagation Neural Network to classify the benign or malignant stage.

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CHAPTER 1

INTRODUCTION

1.1 DIGITAL IMAGE PROCESSING

The identification of objects in an image would probably start with image processing techniques such as noise removal, followed by (low-level) feature extraction to locate lines, regions and possibly areas with certain textures.

The clever bit is to interpret collections of these shapes as single objects, e.g. cars on a road, boxes on a conveyor belt or cancerous cells on a microscope slide. One reason this is an AI problem is that an object can appear very different when viewed from different angles or under different lighting. Another problem is deciding what features belong to what object and which are background or shadows etc. The human visual system performs these tasks mostly unconsciously but a computer requires skillful programming and lots of processing power to approach human performance.

Manipulating data in the form of an image through several possible techniques. An image is usually interpreted as a two-dimensional array of brightness values, and is most familiarly represented by such patterns as those of a photographic print, slide, television screen, or movie screen. An image can be processed optically or digitally with a computer.

CHAPTER 8
CONCLUSION AND FUTURE ENHANCEMENT

CONCLUSION

The skin cancer detected by using neural network here we create a graphical user interface for getting input images, analyzing and classifying the output .we comprehensively illustrate the color conversion, GLCM feature extraction technique, neural network and ABCD parameters to classify the output. By using these methods we get a more accuracy , specificity, and the performance also be increased . ANN has been implemented for classification of skin lesion. PNN is adopted for it has fast speed on training and simple structure. More images of were used to train the ANN classifier and tests were run on different set of images to examine classifier accuracy.

FUTURE ENHANCEMENT

In future we will increased the performance of this process and able to get more accuracy. Automatic defects detection is very important in many diagnostic and therapeutic applications. This work has introduced one automatic brain tumor detection method to increase the accuracy and yield and decrease the diagnosis time.. And then last stage, back propagation Neural Network (BPN) are employed to classify the Normal and abnormal. An efficient algorithm is proposed for tumor detection based on the Spatial Fuzzy C-Means Clustering.

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GOBI (Tk), ERODE (Dt).

INTERNSHIP

Gmail

HODIT <hodit@jkkmct.edu.in>

Inplant Training

1message

WED 19 APR 2022 at 11.30am

From: HODIT<hodit@jkkmct.edu.in>
Date: WED 19 APR 2022 at 11.30am
Subject:Inplant Training -reg
To: HR<hrqtreetechnologies.com>

Dear **Sir,**

I am requesting you to give permission for In plant Training to 10 students of 3rd B.TECH-Information Technology in your company from 02.05.2022 to 07.05.2022. I give assurance to the students to make a significant contribution to your organization. They look forward to working with you and your fine team. So kindly give the permission to complete their in plant training in your company as successful manner.

Refer the following students :(**GOWTHAM.H, MAHANTESH.S, NANDHINI.R, NAVEEN.S, NINGARAJU.S, NITHYA.K, PRABHU.M, PRIYADARSINI.T, VAIDEVI.M, VAIGAIRAJ.M)**

Sincerely,

Head of the Department
JKK Munirajah College of Technology T.N.Palayam, Erode
638506, Tamilnadu.

PRINCIPAL
JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

Gmail HR<hrqtreetechnologies.com>

Inplant Training

1message

MON 24 APR 2022 at 11.30am

From: HR<hrqtreetechnologies.com>

Date: MON 24 APR 2022 at 11.30am

Subject: Inplant Training -reg

To: HODIT<hodit@jkkmct.edu.in>

Dear Sir/Madam,

Noted and Accepted your Request.

This is to inform your department third year B.TECH –Information Technology students **GOWTHAM.H, MAHANTESH.S, NANDHINI.R, NAVEEN.S, NINGARAJU.S, NITHYA.K, PRABHU.M, PRIYADARSINI.T, VAIDEVI.M, VAIGAIRAJ.M** granted permission for their internship from 02.05.2022 to 07.05.2022 in our company. So kindly make necessaryarrangements for the same and also inform to your students must come with proper dress code and college ID card.

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JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

Sincerely,HR,
Qtree Technologies.
Coimbatore.

QTREE TECHNOLOGIES

No 22, First Floor ,Ram Nagar ,Coimbatore -641009

CERTIFICATE OF INPLANT TRAINING

This is to certify that Mr/Ms ..... GOWTHAM.H ..... Third year Information Technology from JKK MUNIRAJAH COLLEGE OF TECHNOLOGY, T.N.PALAYAM has Satisfactorily completed his Inplant Training on Data Science & Artificial Intelligence during the period of 02.05.2022 to 7.05.2022 under our Guidance.

DATE :14.05.2022

PROJECT MANAGER

PRINCIPAL
JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY

QTREE TECHNOLOGIES

No 22, First Floor ,Ram Nagar ,Coimbatore -641009

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This is to certify that Mr/Ms ..... MAHANTESH.S ..... Third year Information Technology from JKK MUNIRAJAH COLLEGE OF TECHNOLOGY, T.N.PALAYAM has Satisfactorily completed his Inplant Training on Data Science & Artificial Intelligence during the period of 02.05.2022 to 7.05.2022 under our Guidance.

DATE :14.05.2022

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This is to certify that Mr/Ms ..... NANDHINI.R ..... Third year Information Technology from JKK MUNIRAJAH COLLEGE OF TECHNOLOGY, T.N.PALAYAM has Satisfactorily completed his Inplant Training on Data Science & Artificial Intelligence during the period of 02.05.2022 to 7.05.2022 under our Guidance.

DATE :14.05.2022

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This is to certify that Mr/Ms ..... NAVEEN.S ..... Third year Information Technology from JKK MUNIRAJAH COLLEGE OF TECHNOLOGY, T.N.PALAYAM has Satisfactorily completed his Inplant Training on Data Science & Artificial Intelligence during the period of 02.05.2022 to 7.05.2022 under our Guidance.

DATE :14.05.2022

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This is to certify that Mr/Ms ..... NINGARAJU.S ..... Third year Information Technology from JKK MUNIRAJAH COLLEGE OF TECHNOLOGY, T.N.PALAYAM has Satisfactorily completed his Inplant Training on Data Science & Artificial Intelligence during the period of 02.05.2022 to 7.05.2022 under our Guidance.

DATE :14.05.2022

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This is to certify that Mr/Ms ..... NITHYA.K ..... Third year Information Technology from JKK MUNIRAJAH COLLEGE OF TECHNOLOGY, T.N.PALAYAM has Satisfactorily completed his Inplant Training on Data Science & Artificial Intelligence during the period of 02.05.2022 to 7.05.2022 under our Guidance.

DATE :14.05.2022

PROJECT MANAGER

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No 22, First Floor ,Ram Nagar ,Coimbatore -641009

CERTIFICATE OF INPLANT TRAINING

This is to certify that Mr/Ms ..... PRABHU.M ..... Third year Information Technology from JKK MUNIRAJAH COLLEGE OF TECHNOLOGY, T.N.PALAYAM has Satisfactorily completed his Inplant Training on Data Science & Artificial Intelligence during the period of 02.05.2022 to 7.05.2022 under our Guidance.

DATE :14.05.2022

PROJECT MANAGER

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CERTIFICATE OF INPLANT TRAINING

This is to certify that Mr/Ms ..... PRIYADHARSINI.T ..... Third year Information Technology from JKK MUNIRAJAH COLLEGE OF TECHNOLOGY, T.N.PALAYAM has Satisfactorily completed his Inplant Training on Data Science & Artificial Intelligence during the period of 02.05.2022 to 7.05.2022 under our Guidance.

DATE :14.05.2022

PROJECT MANAGER

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QTREE TECHNOLOGIES

No 22, First Floor ,Ram Nagar ,Coimbatore -641009

CERTIFICATE OF INPLANT TRAINING

This is to certify that Mr/Ms ..... VAIDEVI.M ..... Third year Information Technology from JKK MUNIRAJAH COLLEGE OF TECHNOLOGY, T.N.PALAYAM has Satisfactorily completed his Inplant Training on Data Science & Artificial Intelligence during the period of 02.05.2022 to 7.05.2022 under our Guidance.

DATE :14.05.2022

PROJECT MANAGER

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OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

QTREE TECHNOLOGIES

No 22, First Floor ,Ram Nagar ,Coimbatore -641009

CERTIFICATE OF INPLANT TRAINING

This is to certify that Mr/Ms ..... VAIGAIRAJ.M ..... Third year Information Technology from JKK MUNIRAJAH COLLEGE OF TECHNOLOGY, T.N.PALAYAM has Satisfactorily completed his Inplant Training on Data Science & Artificial Intelligence during the period of 02.05.2022 to 7.05.2022 under our Guidance.

DATE :14.05.2022

PROJECT MANAGER

PRINCIPAL
JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

Gmail

Internship
1message

TUE 15 Feb 2022 at 2.00pm

From: HODIT<hodit@jkkmct.edu.in>
Date: TUE 15 Feb 2022 at 2.00pm
Subject: Internship -reg
To:BRAINERYSPOT<kiruthika@braineryspot.com>

Dear Sir,

I am requesting to be joining your **BRAINERY SPOT TECH**.The requirements are exactly what I have prepared for and hoped todo. I feel confident thatI can make a significant contribution to your organization while at the same time learning from your staff.

Additionally, I shall complete all insurance forms for the new intern orientation. I look forward to working with you and your fine team. I appreciate your confidence in me and providing the chance to work with and observe your outstanding staff.

Refer the following students : **(DEEPAK.A, KALAISELVI.K, KAVIN.P, MUTHUKUMAR.G, PANDIYARAJ.C, SHIJIN KUMAR.K.G, THANGESHWARI.G, POORANESHWARAN.N)**

Sincerely,

2 ndYear IT Students,
J K KMunirajah College of Technology,
T.N.Palayam,Erode-638506,Tamilnadu.

PRINCIPAL
K MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

Gmail

Internship
1message

WED 16 Feb2022 at 3.30pm

From:BRAINERYSPOT<kiruthika@braineryspot.com>

Date: WED 16 Feb2022 at 3.30pm

Subject:Internship-reg

To: HODIT<hodit@jkkmct.edu.in>

Dear **Sir,**

I am writing to confirm my acceptance of your internship offer of 21.02.2022 to 25.02.2022 and to tell you how to be joining my **BRAINERY SPOT TECH**. The requirements are exactly what I have prepared for and hoped to do.I feel confident that I can make a significant contribution to your organization while at the same time learning from my staff.

As we discussed, I will report at 8:00 a.m. on FEBRUARY 21.02.2022 and will be ready to take on my first assignment as an intern from my company. Additionally, I shall complete all insurance forms for the new intern orientation. I look forward to working with you and your fine team. I appreciate your confidence in me and providing the chance to work with and observe my outstanding staff.

Refer the following students:**(DEEPAK.A, KALAISELVI.K, KAVIN.P, MUTHUKUMAR.G, PANDIYARAJ.C, SHIJIN KUMAR.K.G, THANGESHWARI.G, POORANESHWARAN.N)**

Sincerely,

PRINCIPAL
JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

HR Manager,
Brainery Spot Tech,
Coimbatore.

BRAINERY SPOT TECHNOLOGY
LEARNING | DEVELOPMENT | PLACEMENT

Date : 25.02.2022

INTERNSHIP CERTIFICATE

This is to inform that **Mr.DEEPAK A**, 2nd year B.Tech., Information Technology Engineering student of **JKK MUNIRAJAH COLLEGE OF TECHNOLOGY, (ANNA UNIVERSITY)**, T.N.PALAYAM, has attended Internship in our our Organization from Feb 21.02.2022 to Feb 25.02.2022.

During this Internship training, he has learned the overview concepts of **WEB DEVELOPMENT.**

Thanking You.

For BRAINERY SPOT TECHNOLOGY

Authorised Signatory

PRINCIPAL
JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

BRAINERY SPOT TECHNOLOGY
LEARNING | DEVELOPMENT | PLACEMENT

Date : 25.02.2022

INTERNSHIP CERTIFICATE

This is to inform that **Ms.KALAISELVI A**, 2nd year B.Tech., Information Technology Engineering student of **JKK MUNIRAJAH COLLEGE OF TECHNOLOGY, (ANNA UNIVERSITY)**, T.N.PALAYAM, has attended Internship in our our Organization from Feb 21.02.2022 to Feb 25.02.2022.

During this Internship training, She has learned the overview concepts of **WEB DEVELOPMENT.**

Thanking You.

For BRAINERY SPOT TECHNOLOGY

Authorised Signatory

PRINCIPAL
JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

BRAINERY SPOT TECHNOLOGY
LEARNING | DEVELOPMENT | PLACEMENT

Date : 25.02.2022

INTERNSHIP CERTIFICATE

This is to inform that **Mr.KAVIN P**, 2nd year B.Tech., Information Technology Engineering student of **JKK MUNIRAJAH COLLEGE OF TECHNOLOGY, (ANNA UNIVERSITY)**, T.N.PALAYAM, has attended Internship in our our Organization from Feb 21.02.2022 to Feb 25.02.2022.

During this Internship training, he has learned the overview concepts of **WEB DEVELOPMENT.**

Thanking You.

For BRAINERY SPOT TECHNOLOGY

Authorised Signatory

PRINCIPAL
JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

BRAINERY SPOT TECHNOLOGY
LEARNING | DEVELOPMENT | PLACEMENT

Date : 25.02.2022

INTERNSHIP CERTIFICATE

This is to inform that **Mr.SHIJINKUMAR K.G,** 2nd year B.Tech., Information Technology Engineering student of **JKK MUNIRAJAH COLLEGE OF TECHNOLOGY, (ANNA UNIVERSITY),** T.N.PALAYAM, has attended Internship in our our Organization from Feb 21.02.2022 to Feb 25.02.2022.

During this Internship training, he has learned the overview concepts of **WEB DEVELOPMENT.**

Thanking You.

For BRAINERY SPOT TECHNOLOGY

Authorised Signatory

PRINCIPAL
JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

BRAINERY SPOT TECHNOLOGY
LEARNING | DEVELOPMENT | PLACEMENT

Date : 25.02.2022

INTERNSHIP CERTIFICATE

This is to inform that **Mr.MUTHUKUMAR G, 2nd year B.Tech., Information Technology** Engineering student of **JKK MUNIRAJAH COLLEGE OF TECHNOLOGY, (ANNA UNIVERSITY)**, T.N.PALAYAM, has attended Internship in our our Organization from Feb 21.02.2022 to Feb 25.02.2022.

During this Internship training, he has learned the overview concepts of **WEB DEVELOPMENT.**

Thanking You.

For BRAINERY SPOT TECHNOLOGY

Authorised Signatory

PRINCIPAL
JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

BRAINERY SPOT TECHNOLOGY
LEARNING | DEVELOPMENT | PLACEMENT

Date : 25.02.2022

INTERNSHIP CERTIFICATE

This is to inform that **Mr.PANDIYANARAJ C**, 2nd year B.Tech., Information Technology Engineering student of **JKK MUNIRAJAH COLLEGE OF TECHNOLOGY, (ANNA UNIVERSITY)**, T.N.PALAYAM, has attended Internship in our our Organization from Feb 21.02.2022 to Feb 25.02.2022.

During this Internship training, he has learned the overview concepts of **WEB DEVELOPMENT.**

Thanking You.

For BRAINERY SPOT TECHNOLOGY

Authorised Signatory

PRINCIPAL
JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

BRAINERY SPOT TECHNOLOGY
LEARNING | DEVELOPMENT | PLACEMENT

Date : 25.02.2022

INTERNSHIP CERTIFICATE

This is to inform that **Ms.THANGESHWARI G**, 2nd year B.Tech., Information Technology Engineering student of **JKK MUNIRAJAH COLLEGE OF TECHNOLOGY, (ANNA UNIVERSITY)**, T.N.PALAYAM, has attended Internship in our our Organization from Feb 21.02.2022 to Feb 25.02.2022.

During this Internship training, She has learned the overview concepts of **WEB DEVELOPMENT.**

Thanking You.

For BRAINERY SPOT TECHNOLOGY

Authorised Signatory

PRINCIPAL
JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

BRAINERY SPOT TECHNOLOGY
LEARNING | DEVELOPMENT | PLACEMENT

Date : 25.02.2022

INTERNSHIP CERTIFICATE

This is to inform that **Mr.POORANESHWARAN N**, 2nd year B.Tech., Information Technology Engineering student of **JKK MUNIRAJAH COLLEGE OF TECHNOLOGY, (ANNA UNIVERSITY)**, T.N.PALAYAM, has attended Internship in our our Organization from Feb 21.02.2022 to Feb 25.02.2022.

During this Internship training, he has learned the overview concepts of **WEB DEVELOPMENT.**

Thanking You.

For BRAINERY SPOT TECHNOLOGY

Authorised Signatory

PRINCIPAL
JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

Gmail

Internship
1message

Mon 14 Feb 2022 at 2.00pm

From: HODIT<hodit@jkkmct.edu.in>
Date: Mon 14 Feb 2022 at 2.00pm
Subject:Internship -reg
To:DURGATECH<kiruthikan@durgatech.com>

Dear **sir,**

I am requesting to be joining your **DURGA TECH.**The requirements are exactly what I have prepared for and hoped todo. I feel confident that I can make a significant contribution to your organization while at the same time learning from your staff.

Additionally, I shall complete all insurance forms for the new intern orientation. I look forward to working with you and your fine team. I appreciate your confidence in me and providing the chance to work with and observe your outstanding staff.

Refer the following students:
(A.AJAYSRI,M.DHARANI,A.PARVATHY,S.GOKUL,N.RAVISANKARAN,N.SIVABALAJI)

Sincerely,

2 ndYear IT Students,
J K K Munirajah College of Technology,
T.N.Palayam,Erode-638506,Tamilnadu.

PRINCIPAL
JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

Gmail

Internship
1message

Tue 15 Feb 2022 at 3.30 pm

From:DURGATECH<kiruthika@durgatech.com>

Date: Tue 15 Feb 2022 at 3.30 pm

Subject:Internship-reg

To: HODIT<hodit@jkkmct.edu.in>

Dear sir,

I am writing to confirm my acceptance of your internship offer of 21.02.2022 to 25.02.2022 and to tell you how to be joining my **DURGA TECH.** The requirements are exactly what I have prepared for and hoped to do.I feel confident that I can make a significant contribution to your organization while at the same time learning from my staff.

As we discussed, I will report at 8:00 a.m. on FEBRUARY 21.02.2022 and will be ready to take on my first assignment as an intern from my company. Additionally, I shall complete all insurance forms for the new intern orientation. I look forward to working with you and your fine team. I appreciate your confidence in me and providing the chance to work with and observe my outstanding staff.

Refer the following students

(A.AJASRI,M.DHARANI,A.PARVATHY,S.GOKUL,N.RAVISANKARAN,N.SIVABALAJI)

Sincerely,
HR Manager,
Durga Tech,
Erode.

PRINCIPAL
MUNIRAJAH COLLEGE
OF TECHNOLOGY
PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

Since 2009

Durga Tech
Research & Development

Date : 25.02.2022

This is to certify that A. AjaySri Reg.No: 131220205001 in B.Tech(IT) II year student of JKK Munirajah College of Technology, Gobi has completed the Internship/~~In-plant~~ Training under the Web Development in Durga Tech from 21.2.22 to 25.2.22

During this Internship/~~In-plant~~ Training A. AjaySri found to be highly sincere, committed, hard working, progressive and professional towards her/~~his~~ work and is capable of discharging her/~~his~~ duties in a similar capacity and her/~~his~~ conduct was found to be good during her/~~his~~ period of Internship/~~In-plant~~ Training.

We wish A. AjaySri success in her/~~his~~ future endeavors in her/~~his~~ career.

Regards

For Durga Tech

Thanking You

www.durgatech.org
info.durgatech@gmail.com

109, MR Complex, Nehru Street, Ram Nagar,
Gandhipuram, Coimbatore - 641009.
Ph : 99449 16107

PRINCIPAL
JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (TK), ERODE (Dt).

Since 2009

Durga Tech
Research & Development

Date : 25.02.2022

This is to certify that M. Dharani Reg.No: 731220205006 in BTech(IT) II year student of JKKMunirajah College of Technology, Gobi has completed the Internship/~~In-plant~~ Training under the Web Development in **Durga Tech** from 21.2.22 to 25.2.22

During this Internship/~~In-plant~~ Training M. Dharani found to be highly sincere, committed, hard working, progressive and professional towards her/~~his~~ work and is capable of discharging her/~~his~~ duties in a similar capacity and her/~~his~~ conduct was found to be good during her/~~his~~ period of Internship/~~In-plant~~ Training.

We wish M. Dharani success in her/~~his~~ future endeavors in her/~~his~~ career.

Thanking You

For Durga Tech

www.durgatech.org
info.durgatech@gmail.com

109, MR Complex, Nehru Street, Ram Nagar,
Gandhipuram, Coimbatore - 641009.
Ph : 99449 16107

PRINCIPAL
JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

Since 2009

Durga Tech
Research & Development

Date : 25.02.2022

This is to certify that S. Gokul Reg.No: 731220205009 in BTech(IT) II year student of JKKMunirajah College of Technology, Gobi has completed the Internship/~~In-plant~~ Training under the Web Development in **Durga Tech** from 21.2.22 to 25.2.22

During this Internship/~~In-plant~~ Training S. Gokul found to be highly sincere, committed, hard working, progressive and professional towards ~~her~~/his work and is capable of discharging ~~her~~/his duties in a similar capacity and ~~her~~/his conduct was found to be good during ~~her~~/his period of Internship/~~In-plant~~ Training.

We wish S. Gokul success in ~~her~~/his future endeavors in ~~her~~/his career.

Regards

For Durga Tech

Thanking You

www.durgatech.org
info.durgatech@gmail.com

109, MR Complex, Nehru Street, Ram Nagar,
Gandhipuram, Coimbatore - 641009.
Ph : 99449 16107

PRINCIPAL
JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

Since 2009

Date : 25.02.2022

Durga Tech

Research & Development

This is to certify that A. Parvathy Reg.No: 731220205017 in B.TECH (IT) II year student of JKK Munirajah College of Technology, Gobi has completed the Internship/~~In-plant~~ Training under the Web Development in Durga Tech from 21.2.22 to 25.2.22

During this Internship/~~In-plant~~ Training A. Parvathy found to be highly sincere, committed, hard working, progressive and professional towards her/~~his~~ work and is capable of discharging her/~~his~~ duties in a similar capacity and her/~~his~~ conduct was found to be good during her/~~his~~ period of Internship/~~In-plant~~ Training.

We wish A. Parvathy success in her/~~his~~ future endeavors in her/~~his~~ career.

Thanking You

For Durga Tech

9449 16107

www.durgatech.org
info.durgatech@gmail.com

109, MR Complex, Nehru Street, Ram Nagar,
Gandhipuram, Coimbatore - 641009.
Ph : 99449 16107

PRINCIPAL
JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

Since 2009

Date : 25.02.2022

Durga Tech

Research & Development

This is to certify that N. Ravisankaran Reg.No: 731220205020 in BTech(IT) II year student of JKK Munirajah College of Technology, Gobi has completed the Internship/~~In-plant~~ Training under the Web Development in **Durga Tech** from 21.2.22 to 25.2.22

During this Internship/~~In-plant~~ Training N. Ravisankaran found to be highly sincere, committed, hard working, progressive and professional towards ~~her~~/his work and is capable of discharging ~~her~~/his duties in a similar capacity and ~~her~~/his conduct was found to be good during ~~her~~/his period of Internship/~~In-plant~~ Training.

We wish N. Ravisankaran success in ~~her~~/his future endeavors in ~~her~~/his career.

Regards

Thanking You

for Durga Tech

www.durgatech.org
info.durgatech@gmail.com

109, MR Complex, Nehru Street, Ram Nagar,
Gandhipuram, Coimbatore - 641009.
Ph : 99449 16107

PRINCIPAL
JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

Since 2009

Durga Tech
Research & Development

Date : 25.02.2022

This is to certify that N. Sivabalaji Reg.No: 731220205022 in BTech(IT) II year student of JKKMunirajah College of Technology, Gobi has completed the Internship/~~In-plant~~ Training under the Web Development in **Durga Tech** from 21.2.22 to 25.2.22

During this Internship/~~In-plant~~ Training N. Sivabalaji found to be highly sincere, committed, hard working, progressive and professional towards ~~her~~/his work and is capable of discharging ~~her~~/his duties in a similar capacity and ~~her~~/his conduct was found to be good during ~~her~~/his period of Internship/~~In-plant~~ Training.

We wish N. Sivabalaji success in ~~her~~/his future endeavors in ~~her~~/his career.

Regards

Thanking You

Durga Tech

www.durgatech.org
info.durgatech@gmail.com

109, MR Complex, Nehru Street, Ram Nagar,
Gandhipuram, Coimbatore - 641009.
Ph : 99449 16107

PRINCIPAL

JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

Gmail

Internship

1message

Mon 14 Feb 2022 at 2.00pm

From: HODIT<hodit@jkkmct.edu.in>

Date: Mon 14 Feb2022 at 2.00pm

Subject:Internship-reg

To: LITZTECH<karthik21@litztech.com>

Dear Sir,

I am requesting to be joining your **LITZ TECH**. The requirements are exactly what I have prepared for and hoped todo. I feel confident that I can make a significant contribution to your organization while at the same time learning from your staff.

Additionally, I shall complete all insurance forms for the new intern orientation. I look forward to working with you and your fine team. I appreciate your confidence in me and providing the chance to work with and observe your outstanding staff.

Refer the following students:**(S.PRIYANKA,C.SHILPA)**

Sincerely,

2 ndYear IT Students,

J K K Munirajah College of Technology,

T.N.Palayam,Erode-638506,Tamilnadu.

PRINCIPAL
JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

Gmail

Internship

1message

Tue 15 Feb 2022 at 3.30 pm

From: LITZ TECH<karthik21@litztech.com>

Date: Tue 15 Feb 2022 at 3.30 pm

Subject:Internship-reg

To: HODIT<hodit@jkkmct.edu.in>

Dear **Sir,**

I am writing to confirm my acceptance of your internship offer of 21.02.2022 to 25.02.2022 and to tell you how to be joining my **LITZ TECH.** The requirements are exactly what I have prepared for and hoped to do.I feel confident that I can make a significant contribution to your organization while at the same time learning from my staff.

As we discussed, I will report at 8:00 a.m. on FEBRUARY 21.02.2022 and will be ready to take on my first assignment as an intern from my company. Additionally, I shall complete all insurance forms for the new intern orientation. I look forward to working with you and your fine team. I appreciate your confidence in me and providing the chance to work with and observe my outstanding staff.

Refer the following students:**(S.PRIYANKA,C.SHILPA)**

Sincerely,

HRManager,
Litz Tech,
Coimbatore.

PRINCIPAL
KK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

LITZ TECH

Certificate of Training and Instruction

This is to certify that **PRIYANKA S (731220205018)** a student Of **"J.K.K.MUNIRAJAH COLLEGE OF TECHNOLOGY"** has successfully completed her **INTERNSHIP PROGRAM in ANDROID APP DEVELOPMENT** at our Concern from 21.02.2022 to 25.02.2022

LITZ TECH INDIA PVT LTD

Authorized Signatory

PRINCIPAL
JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

STUDENT ID: LITZH22898

CERTIFICATE ID: LITZH22899

No 4, Arangasamy Nagar, Sitra, Civil Aerodrome(po),Coimbatore - 641014

www.litztech.in i coimbatore@liztech.in i Tei : 0422 4382930

LITZ TECH

Certificate of Training and Instruction

This is to certify that **SHILPA C (731220205303)** a student
Of **"J.K.K.MUNIRAJAH COLLEGE OF TECHNOLOGY"**
has successfully completed her
INTERNSHIP PROGRAM in ANDROID APP DEVELOPMENT
at our Concern from 21.02.2022 to 25.02.2022

LITZ TECH INDIA PVT LTD

Authorized Signatory

PRINCIPAL
K.K MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

STUDENT ID: LITZH22898

CERTIFICATE ID: LITZH22899

No 4, Arangasamy Nagar, Sitra, Civil Aerodrome(po),Coimbatore - 641014

www.litztech.in i coimbatore@liztech.in i Tei : 0422 4382930