

Thiagarajar College Of Engineering
Computer Science and Engineering

Course Code: 18CS810

Course Name: Project

List Of Projects

| S.No | Batch No | Student Name | Project Title |
|------|----------------------------|-------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 1 | 18C001 18C011 18C101 | Aathikrishna S K Anbumani T Sri Raaghav Nu | House Price Prediction Using Hybrid Machine Learning Models |
| 2 | 18C003 18C048 18C091 | Abishek Joshua T Karthikeyan G Sathyamoorthi M | Tce Qna - A Community Question And Answer System For Tce |
| 3 | 18C004 18C096 18C125 | Adithya Akilesh Kumar Ka Shree Shylesh N Yudhish Kumar A | Heart Disease Prediction Using Iot And Edge Technology |
| 4 | 18C005 18C078 18C103 | Aiswaryah S Renjith R T Srinivasan B | Big Mart Sales Prediction |
| 5 | 18C006 18C060 18C081 | Akash Bhat Mohit Sharma Ritik Singh Jamwall | Predicting Trend Of Stock Market Using Convolutional Neural Network |
| 6 | 18C052 18C009 18C059 | Kishore M Ananda Kumar Mohamed Zuhair | Sign Language Detection |
| 7 | 18C010 18C027 18C066 | Anandhakumar R Gomathinayagam A Nithishkumar K | Stock Market Prediction Using Hybrid Algorithm |
| 8 | 18C012 18C013 18C055 | Anusri V Aravind D Madhina C | Student Data Record Management Using Blockchain |
| 9 | 18C015 18C071 18C105 | Arun Karthick M Prasanna Kumar R Suganesh R | Attendance System Using Face Recognition |
| 10 | 18C038 18C100 18C016 | Ibrahim Badhusha Sreemaan Kcks Arun Kumar M | Integrated Approach For Dial-A-Ride Problem |
| 11 | 18C020 18C067 18C114 | Deepa S Nivetha S Thulasi Lakshmi K | Phishing Attack Detection Using Hybrid Ensemble Voting Classifier |
| 12 | 18C022 18C040 18C045 | Dhanush S Jaswanth V Karthivasanth E | Machine Learning Based Phishing Url Detection System |
| 13 | 18C025 18C029 18C088 | Esakki Rajan E Gopika B Sams Aafiya Banu S | Smote Variants For Data Balancing In Intrusion Detection System Using Machine Learning |
| 14 | 18C026 18C092 18C128 | Gokul Ganesh I Selva Sugaan A Hari Haran S | Hdd Failure Detection Using Machine Learning With The Cloud Computing Resource |
| 15 | 18C028 18C102 18C110 | Gomathy K Srinidhi V Swaathi K | An Incremental Tree Based Approach To Detect Malware In Android Apps |

| | | | |
|----|----------------------------|---------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| 16 | 18C037 18C041 18C099 | Harsini C Kamali G Sowndariyae | Distributed Denial Of Service Attack Detectionusing Ensemblemethod |
| 17 | 18C047 18C051 18C069 | Karthika S P Keerthana Priya R Padmarekha M | Behavioral Based Lot Device Identification |
| 18 | 18C057 18C133 18C139 | Meenakshi Sundaram S Navin Kumar S Vijay Kumar P | Darknet Traffic Classification Using Machine Learning |
| 19 | 18C072 18C136 | Pravecn Kumar R Ramkumar K S | Interactions Design In Virtual Reality |
| 19 | 18C073 18C083 18C130 | Priyankaa A Roshini S Mahalakshmi R | Anomalies Detection And Fraudulent Transaction Identification |
| 20 | 18C074 18C111 18C124 | Rajamanju B Swathi Priya G Vishruthi Lb Sankar | Municipal Solid Waste Segregation Using Residual Network |
| 21 | 18C075 18C107 18C121 | Rajanandhini H Sunil Kumar Varsha Nair H | Deep Learning-Based Hybrid Lung Cancer Prediction System With Lot Discussion |
| 22 | 18C084 18C032 18C050 | Sachithanand A Gunasekaran A Karuppaiyasriram A L | User Authentication For Smart E-Governance |
| 23 | 18C023 18C093 18C109 | Dhanusri B Senthoo Leena D Suvetha S | Performance Analysis Of Machine Learning And Deep Learning Algorithms In Credit Card Fraud Detection |
| 24 | 18C098 18C122 18C138 | Snekavalli T Vasunthra Petchi U Sindhu R | Detection Of Network Intrusion Using Ensemble Method |
| 25 | 18C104 18C129 18C097 | Sudha M Keerthana K Shuruthi V | Spam Hel:Spam Detection Using Nlp Based Hybrid Ensemble Learning |
| 26 | 18C106 | Sugilal M G | Driver Safety Tool |

THIAGARAJAR COLLEGE OF ENGINEERING MADURAI-15

(A Government Aided Autonomous Institution Affiliated to Anna University)



BONAFIDE CERTIFICATE

Certified that this project report "**House Price Prediction Using Hybrid Machine Learning Models**" is the bonafide work of "**Aathikrishna S K (18C001), Anbumani T (18C011), Sri Raaghav N U (18C101)**" who carried out the project work under my supervision during the Academic Year 2021-2022.

SIGNATURE

Dr. S. Mercy Shaline, M.E., Ph.D.,

HEAD OF THE DEPARTMENT

COMPUTER SCIENCE AND ENGINEERING

THIAGARAJAR COLLEGE OF ENGG

MADURAI - 625 015

SIGNATURE

Dr. B. Subbulakshmi, M.E., Ph.D.,

ASSISTANT PROFESSOR

COMPUTER SCIENCE AND ENGINEERING

THIAGARAJAR COLLEGE OF ENGG

MADURAI - 625 015

Submitted for the VIVA VOCE Examination held at Thiagarajar College of
Engineering on 15.06.2022

INTERNAL EXAMINER

EXTERNAL EXAMINER

THIAGARAJAR COLLEGE OF ENGINEERING MADURAI-15

(A Government Aided Autonomous Institution Affiliated to Anna University)



BONAFIDE CERTIFICATE

Certified that this project report “TCE QnA - A Community Question and Answer system for TCE” is the bonafide work of “Abishek Joshua T (18C003), Karthikeyan G (18C048), Sathyamoorthi M (18C091)” who carried out the project work under my supervision during the Academic Year 2021-2022.

SIGNATURE

Dr.S. Mercy Shalinie, M.E., Ph.D.,
HEAD OF THE DEPARTMENT
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

SIGNATURE

Dr. K.NarasimhaMallikarjunan, M.E., Ph.D.,
ASSOCIATE PROFESSOR
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

Submitted for the VIVA VOCE Examination held at Thiagarajar College of
Engineering on 15/06/2022

INTERNAL EXAMINER

EXTERNAL EXAMINER

THIAGARAJAR COLLEGE OF ENGINEERING MADURAI-15

(A Government Aided Autonomous Institution Affiliated to Anna University)



BONAFIDE CERTIFICATE

Certified that this project report “**Heart Disease Prediction using IOT and EDGE Technology**” is the bonafide work of “**Adithya Akilesh Kumar K A (18C004), Shree Shylesh N (18C096), Yudhish Kumar A (18C125)**” who carried out the project work under my supervision during the Academic Year 2021-2022.

SIGNATURE

Dr.S.Mercy Shalinie, M.E., Ph.D.,
HEAD OF THE DEPARTMENT
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

SIGNATURE

Dr.R.Leena Sri, M.E., Ph.D.,
ASSOCIATE PROFESSOR
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

Submitted for the VIVA VOCE Examination held at Thiagarajar College of
Engineering on 15/06/2022

INTERNAL EXAMINER

EXTERNAL EXAMINER

THIAGARAJAR COLLEGE OF ENGINEERING MADURAI-15

(A Government Aided Autonomous Institution Affiliated to Anna University)



BONAFIDE CERTIFICATE

Certified that this project report “Big Mart Sales Prediction” is the bonafide work of “Aiswaryah S(18C005), Renjith R T(18C078) and Srinivasan B(18C103)” who carried out the project work under my supervision during the Academic Year 2021-2022.

SIGNATURE

Dr. S. Mercy Shalinie, M.E., Ph.D.,

HEAD OF THE DEPARTMENT

COMPUTER SCIENCE AND ENGINEERING

THIAGARAJAR COLLEGE OF ENGG.

MADURAI – 625 015

SIGNATURE

Dr. G. Madhupriya , M.E., Ph.D.,

ASSOCIATE PROFESSOR

COMPUTER SCIENCE AND ENGINEERING

THIAGARAJAR COLLEGE OF ENGG.

MADURAI – 625 015

Submitted for the VIVA VOCE Examination held at Thiagarajar College of

Engineering on 15/06/2022

INTERNAL EXAMINER
EXTERNAL EXAMINER

THIAGARAJAR COLLEGE OF ENGINEERING MADURAI-15

(A Government Aided Autonomous Institution Affiliated to Anna University)



BONAFIDE CERTIFICATE

Certified that this project report “Predicting trend of stock market using convolutional neural network” is the bonafide work of “Akash bhat(18C006), Mohit Sharma(18C060), Ritik Singh Jamwal(18C081)” who carried out the project work under my supervision during the Academic Year 2021-2022.

SIGNATURE

Dr.S. Mercy Shalinie, M.E., Ph.D.,
HEAD OF THE DEPARTMENT
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI - 625 015

SIGNATURE

Dr M.K Kavitha Devi, M.E., Ph.D.,
SUPERVISOR & PROFESSOR
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI - 625 015

Submitted for the VIVA VOCE Examination held at Thiagarajar College of
Engineering on ..15/06/22.

INTERNAL EXAMINER

EXTERNAL EXAMINER

**THIAGARAJAR COLLEGE OF ENGINEERING
MADURAI-15**

(A Government Aided Autonomous Institution Affiliated to Anna University)



BONAFIDE CERTIFICATE

Certified that this project report "Sign Language Detection" is the bonafide work of "Kishore M(18C052), Ananda Kumar C(18C009), Mohamed Zuhair K A(18C059)" who carried out the project work under my supervision during the Academic Year 2021-2022.

SIGNATURE

Dr.S. Mercy Shalinie, M.E., Ph.D.,
HEAD OF THE DEPARTMENT
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI - 625 015

SIGNATURE

Dr. Leena Sri R
ASSOCIATE PROFESSOR
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI - 625 015

Submitted for the VIVA VOCE Examination held at Thiagarajar College of
Engineering on 15-06-2022

INTERNAL EXAMINER

EXTERNAL EXAMINER

THIAGARAJAR COLLEGE OF ENGINEERING MADURAI-15

(A Government Aided Autonomous Institution Affiliated to Anna University)



BONAFIDE CERTIFICATE

Certified that this project report “Stock Market Prediction Using Hybrid Algorithm” is the bonafide work of “ANANDHAKUMAR R (18C010), GOMATHINAYAGAM A (18C027), NITHISHKUMAR K (18C066)” who carried out the project work under my supervision during the Academic Year 2021-2022.

SIGNATURE

Dr.S. Mercy Shalinie, M.E., Ph.D.,
HEAD OF THE DEPARTMENT
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

SIGNATURE

Mr.C. Sridharan, M.E.
SUPERVISOR & ASSOCIATE PROFESSOR
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

Submitted for the VIVA VOCE Examination held at Thiagarajar College of
Engineering on ..15.06.2022

INTERNAL EXAMINER

EXTERNAL EXAMINER

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Nithishkumar K has undertaken his internship with **EPIKInDiFi Software and Solutions Pvt Ltd** from 1 December 2021 to 31 May 2022 under the guidance of Edison Ramesh (Senior Member of Technical Staff).

For EPIKInDiFi Software and Solutions Pvt Ltd,



Ravitha Devasenapathy

CHRO

Date: 21.06.2022

**THIAGARAJAR COLLEGE OF ENGINEERING
MADURAI-15**

(A Government Aided Autonomous Institution Affiliated to Anna University)



BONAFIDE CERTIFICATE

Certified that this project report "Student Data Record Management using Blockchain" is the bonafide work of "ANUSRI V (18C012), ARAVIND D (18C013), and MADHINA C (18C055)" who carried out the project work under my supervision during the Academic Year 2021-2022.

SIGNATURE

Dr.S.Mercy Shalinie, M.E., Ph.D.,
HEAD OF THE DEPARTMENT
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI - 625 015

SIGNATURE

Dr.S.Mercy Shalinie, M.E., Ph.D.,
PROJECT GUIDE / HoD
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI - 625 015

Submitted for the VIVA-VOCE Examination held at Thiagarajar College of
Engineering on 15. 06. 2022

INTERNAL EXAMINER

EXTERNAL EXAMINER

THIAGARAJAR COLLEGE OF ENGINEERING

MADURAI-15

(A Government Aided Autonomous Institution Affiliated to Anna University)



BONAFIDE CERTIFICATE

Certified that this project report “Attendance System Using Face Recognition” is the bonafide work of “ARUN KARTHICK M (18C015), PRASANNA KUMAR R (18C071), SUGANESH R (18C105)” who carried out the project work under my supervision during the Academic Year 2021-2022.

SIGNATURE

Dr.S.Mercy Shalinie, M.E., Ph.D.,
HEAD OF THE DEPARTMENT
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

SIGNATURE

Mr.C.Sridharan, M.E.;;
SUPERVISOR & ASSOCIATE PROFESSOR
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

Submitted for the VIVA VOCE Examination held at Thiagarajar College of

Engineering on ...15.06.2022

INTERNAL EXAMINER

EXTERNAL EXAMINER

THIAGARAJAR COLLEGE OF ENGINEERING MADURAI-15

(A Government Aided Autonomous Institution Affiliated to Anna University)



BONAFIDE CERTIFICATE

Certified that this project report “**Integrated Approach for Dial-a-ride Problem**” is the bonafide work of “**Ibrahim Badhusha U (18C038), Sreemaan KCKS (18C100), Arun Kumar M (18C016)**” who carried out the project work under my supervision during the Academic Year 2021-2022.


SIGNATURE

Dr.S. Mercy Shalinie, M.E., Ph.D.,
HEAD OF THE DEPARTMENT
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015


SIGNATURE

Dr. K. Narasima Mallikarjunan, M.E., Ph.D.,
ASSOCIATE PROFESSOR
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

Submitted for the VIVA VOCE Examination held at Thiagarajar College of
Engineering on 15/06/2022


INTERNAL EXAMINER


EXTERNAL EXAMINER



Date: July 22, 2022

Internship Completion Letter

Rahul Ramachandran
Human Resources

Rahul.ramachandran@hpe.com

This is to certify that the Project entitled **Unified clients** is a bonafide work carried out by **Arunkumar Muppala** from **25-Jan-22 to 22-Jul-22**.

The Intern has shown great enthusiasm and interest in the project. His understanding of the concept is good and he has effectively participated in all phases of the project. During this period his conduct has been excellent.

For and on behalf of Hewlett Packard (India) Software Operation Private Limited

Rahul Ramachandran
Human Resources

**Hewlett Packard (India) Software
Operation Private Limited**

Regd. Office: Survey No. 192
Whitefield Road, Mahadevapura
Bengaluru – 560 048
CIN: U72200KA1988PTC009435
Phone No: 080 6151 4770

hpe.com/in

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ibrahim Badhusha U has undertaken his internship with **EPIKInDiFi Software and Solutions Pvt Ltd** from 1 December 2021 to 31 May 2022 under the guidance of Sedhuraghuraman B (Senior Member of Technical Staff).

For EPIKInDiFi Software and Solutions Pvt Ltd,



Ravitha Devasenapathy

CHRO

Date: 21.06.2022

22-Sep-2021

Mr. Sreemaan K.C.K.S.

E Mail ID: sreemaansubramanian2000@gmail.com

Mobile Number: 7305373901

Dear Sreemaan,

We are delighted to offer you the position of **Software Engineer – I** at **CaratLane Trading Private Limited**. Your initial posting will be at **Chennai**.

The offer is valid upon successful completion of your graduation by 2022 with all papers cleared.

As agreed during our discussions this offer is valid provided you accept this offer in writing by **22-Sep-2021** and join us on or before **01-Jun-2022**. Under the terms of this offer:

1. **Total Compensation:** As a regular full time, employee of the company your annual salary will be **Rs 7,00,000/- (Rupees Six Lakhs Only)**. Further you will be eligible to participate in the company's group medical Insurance program and for Gratuity as per the act. These benefits are worth **Rs 22,335/- (Rupees Twenty-Two Thousand Three Hundred and Thirty Five Only)** and will be in addition to your Salary mentioned above. You are eligible for Joining bonus of **Rs 1,00,000/- (Rupees One Lakh Only)** payable at the end of completion of one month of service with CaratLane. Please note that the joining bonus is subject to successful completion of one year of service with the company and will be recovered in case of voluntary exit within one year of the joining date. A detailed break up of your salary is provided in Annexure A. All forms of compensation referred to in this letter are subject to deduction to reflect applicable withholding and payroll taxes.

2. **Probation Period:** You will be on probation for a period of **6 months**. Your services will be confirmed at the end of the probation period, based on your performance evaluation against key metrics as defined in the KRAs issued to you at the time of joining the company.

3. **Notice Period:** During the period of probation, yourself or the Company has the right to terminate the services with a notice of **30 days** in writing or basic salary in lieu of notice. Following probation, if either party wishes to terminate this agreement either, they may do so by giving the other party **60 days'** notice or basic salary in lieu of notice. Your employment with the Company will be "at will," meaning that either you or the Company will be entitled to terminate your employment at any time and for any reason, with or without cause subject to requirements of applicable law. The Company reserves the right to terminate your service at any time without notice should you be guilty of misdemeanor, misconduct, negligence or any breach of the terms and conditions of this agreement.

4. **Tax & Compliance:** It is your continuous responsibility to meet all requirements under Indian Tax Laws including tax compliance and filing of personal tax returns in respect of all payments paid to you during your employment with CaratLane Trading Pvt Ltd. Taxes on any payment made under this letter will be borne by you. The Company shall deduct tax at source and any payments under this letter that require such deduction to be made by the employer in accordance with the Indian Tax Laws.

CaratLane Trading Private Limited

(A Subsidiary of Titan Company Limited)

2nd,3rd&4th Floor,#32, Rutland Gate 2nd Street, Khader Nawaz Khan Road, Nungambakkam, Chennai 60006

Tel : 044-48937922 / 044-48937944 | www.caratlane.com | Toll Free No. : 1800-102-0103

5. **Leave:** No employee is eligible for any leave in the first 3 months of employment. Every employee will be eligible for 21 working days of annual leave thereafter. Please refer the Leave Policy for more details.

6. **Non-Disclosure:** CaratLane has extended this offer to you based upon your experience, knowledge, background, skills and abilities and not because of your knowledge of your current employer's or any previous employer's trade secrets or other company specific information. As a condition of employment at CaratLane, you agree not to disclose or use confidential or proprietary information or any trade secrets of any current or prior employer. In this regard, you should be extremely careful not to bring to CaratLane any documents or other materials in tangible form belonging to or acquired from any current or prior employer. You will need to sign the Company's Non-Disclosure Agreement as a condition of your employment at a later date. Also, you represent that you are not subject to any restrictions that prevent you from working for CaratLane.

7. **Work Made for Hire:** All work products developed by the Employee shall be deemed "work made for hire" including the source code if any and shall be the exclusive property of Company or its affiliates without any material, financial or territorial limitation and without any additional payment due from Company other than salary agreed upon. The Employee shall have no proprietary interest or claim whatsoever in or to any work / product developed by him / her pursuant to the employment with the Company.

8. **Discipline:** During the period of your employment, you will be governed by CaratLane rules, operating policies and procedures, notices and new regulations as there may be, which are issued and or amended with cause, from time to time.

9. **Outside Activities:** While you render services to the Company, you will not engage in any other gainful employment, business, and such other activity which results in direct competition to business of the Company without the written consent of the Company or act in any manner detrimental to the interest of the company.

10. **Verification & Reference Check:** This offer is subject to verification of your employment, salary history, education background and a reference check from your previous employers. Any false information provided is subject to termination of employment without any compensation. Please carry your degree certificates and your service certificates and relieving letter from your last / current employer at the time of your joining.

11. **Performance Review:** Salary reviews and increases are given during regular Performance Appraisal schedule in April of each year, subject to our appraisal policy.

We look forward to a challenging and rewarding association with you, as a member of our team.

Please sign the duplicate copy of this letter and return it to us as a token of your acceptance.

Annexure – I

| | |
|--------------------|------------------------------|
| Name | Sreemaan K.C.K.S. |
| Designation | Software Engineer – I |
| Location | Chennai |

| Salary Components | | Monthly | Annual |
|--------------------------|---------------------------------------------------|----------------|----------------|
| | Basic | 29,167 | 350,000 |
| | House Rent Allowance (HRA) | 14,583 | 175,000 |
| | Special Allowance | 2,783 | 33,400 |
| | Conveyance Allowance | 3,000 | 36,000 |
| | Medical Allowance | - | - |
| | Food Coupon* | - | - |
| | LTA* | 4,000 | 48,000 |
| | Communication Reimbursement* | 3,000 | 36,000 |
| | Fuel & Maintenance Reimbursement* | - | - |
| A | Total Gross Per Month (GPM) | 56,533 | 678,400 |
| B | Employer's Contribution to PF | 1,800 | 21,600 |
| | Statutory Bonus | - | - |
| | Employer's Contribution to ESI | - | - |
| C | Annual Total Cost (ATC) - Total of A+B | 58,333 | 700,000 |
| | Deductions | | |
| | Employee's Contribution to PF | 1,800 | 21,600 |
| | ESI | - | - |
| | Voluntary Provident Fund | - | - |
| | Food Coupon | - | - |
| | Professional Tax** | 208 | 2,500 |
| D | Total Deductions | 2,008 | 24,100 |
| | Net Take Home (C - B - D) | 54,525 | 654,300 |
| | Variable Pay (Quarterly Payout) | - | - |
| | Cost to Company (CTC) : ATC + Variable Pay | 58,333 | 700,000 |
| | Medical Insurance | | 5,500 |
| | Gratuity | | 16,835 |
| | Grand CTC | 60,195 | 722,335 |

*Bills to be submitted to the Finance/HR Dept in January every year

**Subject to change as & when revised by authorities.

For CaratLane Trading Private Limited

Authorized Signatory

Read & Accepted

CaratLane Trading Private Limited

(A Subsidiary of Titan Company Limited)

2nd,3rd&4th Floor,#32, Rutland Gate 2nd Street, Khader Nawaz Khan Road, Nungambakkam, Chennai 60006

Tel : 044-48937922 / 044-48937944 | www.caratlane.com | Toll Free No. : 1800-102-0103

**THIAGARAJAR COLLEGE OF ENGINEERING
MADURAI-15**

(A Government Aided Autonomous Institution Affiliated to Anna University)



BONAFIDE CERTIFICATE

Certified that this project report “Phishing Attack Detection using Hybrid Ensemble Voting Classifier” is the bonafide work of “DEEPA S (18C020), NIVETHA S (18C067), THULASI LAKSHMI K (18C114)” who carried out the project work under my supervision during the Academic Year 2021-2022.

SIGNATURE

Dr. S. Mercy Shalinie, M.E., Ph.D.,
HEAD OF THE DEPARTMENT
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

SIGNATURE

Dr. G. S. R. Emil Selvan, M.E., Ph.D.,
SUPERVISOR & ASSISTANT PROFESSOR
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

Submitted for the VIVA VOCE Examination held at Thiagarajar College of
Engineering on ...15/06/2022

INTERNAL EXAMINER

EXTERNAL EXAMINER

THIAGARAJAR COLLEGE OF ENGINEERING MADURAI-15

(A Government Aided Autonomous Institution Affiliated to Anna University)



BONAFIDE CERTIFICATE

Certified that this project report “Machine Learning based Phishing URL Detection System” is the bonafide work of “Dhanush S (18C022) , Jaswanth V (18C040) and Karthivasanth E (18C045)” who carried out the project work under my supervision during the Academic Year 2021-2022.

SIGNATURE

Dr.S. Mercy Shalinie, M.E., Ph.D.,
HEAD OF THE DEPARTMENT
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

SIGNATURE

Dr. K.Sundarakantham, M.E., Ph.D.,
PROFESSOR
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

Submitted for the VIVA VOCE Examination held at Thiagarajar College of
Engineering on 15.06.2022

K. Sundarakantham 15/6/2022
INTERNAL EXAMINER

R. Mahalingam
15/6/22
EXTERNAL EXAMINER

THIAGARAJAR COLLEGE OF ENGINEERING MADURAI-15

(A Government Aided Autonomous Institution Affiliated to Anna University)



BONAFIDE CERTIFICATE

Certified that this project report **SMOTE Variants for Data Balancing in Intrusion Detection System using Machine Learning** is the bonafide work of **ESAKKI RAJAN E (18C025), GOPIKA B (18C029) and SAMS AAFIYA BANU S (18C088)** who carried out the project work under my supervision during the Academic Year 2021-2022.

SIGNATURE

Dr. S. Mercy Shalinie, M.E., Ph.D.,
HEAD OF THE DEPARTMENT
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

SIGNATURE

Dr. M. P. Ramkumar, M. E., Ph.D.,
SUPERVISOR & ASSISTANT PROFESSOR
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

Submitted for the VIVA VOCE Examination held at Thiagarajar College of
Engineering on 15.06.2022

INTERNAL EXAMINER

EXTERNAL EXAMINER

THIAGARAJAR COLLEGE OF ENGINEERING MADURAI-15

(A Government Aided Autonomous Institution Affiliated to Anna University)



BONAFIDE CERTIFICATE

Certified that this project report “**HDD FAILURE DETECTION USING MACHINE LEARNING WITH THE CLOUD COMPUTING RESOURCE**” is the bonafide work of “**Gokul Ganesh I (18C026), Selva Sujan A (18C092), Hari Haran S (18C128)**” who carried out the project work under my supervision during the Academic Year 2021-2022.

SIGNATURE

Dr. S. Mercy Shalinie, M.E., Ph.D.,

HEAD OF THE DEPARTMENT

COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015.

SIGNATURE

Dr. M. P. Ramkumar, M.E., Ph.D.,

SUPERVISOR & DESIGNATION

COMPUTER SCIENCE AND
ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015.

Submitted for the VIVA VOCE Examination held at Thiagarajar College of Engineering on

INTERNAL EXAMINER

EXTERNAL EXAMINER

THIAGARAJAR COLLEGE OF ENGINEERING MADURAI-15

(A Government Aided Autonomous Institution Affiliated to Anna University)



BONAFIDE CERTIFICATE

Certified that this project report “An Incremental Tree based approach to Detect Malware in Android Apps” is the bonafide work of “GOMATHY K (18C028), SRINIDHI V (18C102), SWAATHI K (18C110)” who carried out the project work under my supervision during the Academic Year 2021-2022.

SIGNATURE

Dr. S. Mercy Shalinie, M.E., Ph.D.,
HEAD OF THE DEPARTMENT
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

SIGNATURE

Dr. G. S. R. Emil Selvan, M.E., Ph.D.,
SUPERVISOR & ASSISTANT PROFESSOR
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

Submitted for the VIVA VOCE Examination held at Thiagarajar College of
Engineering on ...15/06/2022

INTERNAL EXAMINER
EXTERNAL EXAMINER

THIAGARAJAR COLLEGE OF ENGINEERING MADURAI-15

(A Government Aided Autonomous Institution Affiliated to Anna University)



BONAFIDE CERTIFICATE

Certified that this project report “Distributed Denial of Service attack detection using Ensemble method” is the bonafide work of “Harsini C (18C037), Kamali G (18C041), Sowndariya E (18C099)” who carried out the project work under my supervision during the Academic Year 2021-2022.

SIGNATURE

Dr.S. Mercy Shalinie, M.E., Ph.D.,
HEAD OF THE DEPARTMENT
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

SIGNATURE

Dr. M. Suguna M.E., Ph.D.,
SUPERVISOR & ASSISTANT PROFESSOR
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

Submitted for the VIVA VOCE Examination held at Thiagarajar College of
Engineering on 15.06.2022

INTERNAL EXAMINER

EXTERNAL EXAMINER

THIAGARAJAR COLLEGE OF ENGINEERING MADURAI-15

(A Government Aided Autonomous Institution Affiliated to Anna University)



BONAFIDE CERTIFICATE

Certified that this project report “**Behavioral based IoT device Identification**” is the bonafide work of “**Karthika S P (18C047), Keerthana Priya R (18C051) and Padmarekha M (18C069)**” who carried out the project work under my supervision during the Academic Year 2021 - 2022.

SIGNATURE

Dr.S. Mercy Shalinie, M.E., Ph.D.,

HEAD OF THE DEPARTMENT

COMPUTER SCIENCE AND ENGINEERING

THIAGARAJAR COLLEGE OF ENGG.

MADURAI – 625 015

SIGNATURE

Mrs. Raja Lavanya, M.E., Ph.D.,

Assistant Professor

COMPUTER SCIENCE AND ENGINEERING

THIAGARAJAR COLLEGE OF ENGG.

MADURAI – 625 015

Submitted for the VIVA VOCE Examination held at Thiagarajar College of
Engineering on 15.06.2022

INTERNAL EXAMINER

EXTERNAL EXAMINER

THIAGARAJAR COLLEGE OF ENGINEERING
MADURAI-15

(A Government Aided Autonomous Institution Affiliated to Anna University)



BONAFIDE CERTIFICATE

Certified that this project report “**DARKNET TRAFFIC CLASSIFICATION USING MACHINE LEARNING**” is the bonafide work of “**MEENAKSHI SUNDARAM S (18C057), NAVIN KUMAR S (18C133), VIJAY KUMAR P (18C139)**” who carried out the project work under my supervision during the Academic Year 2021-2022.

SIGNATURE

Dr.S. Mercy Shalinie, M.E., Ph.D.,
HEAD OF THE DEPARTMENT
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

SIGNATURE

Dr.M.P. Ram Kumar, M.E., Ph.D.,
SUPERVISOR & ASSISTANT PROFESSOR
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

Submitted for the VIVA VOCE Examination held at Thiagarajar College of
Engineering on 15/06/2022

INTERNAL EXAMINER

EXTERNAL EXAMINER

THIAGARAJAR COLLEGE OF ENGINEERING MADURAI-15

(A Government Aided Autonomous Institution Affiliated to Anna University)



BONAFIDE CERTIFICATE

Certified that this project report “INTERACTIONS DESIGN IN VIRTUAL REALITY” is the bonafide work of “Praveen Kumar R (18C072), Ramkumar K S (18C136)” who carried out the project work under my supervision during the Academic Year 2021-2022.

SIGNATURE

Dr.S. Mercy Shalinie, M.E., Ph.D.,
HEAD OF THE DEPARTMENT
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

SIGNATURE

Dr. N. ShivaKumar
ASSISTANT PROFESSOR,
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

Submitted for the VIVA VOCE Examination held at Thiagarajar College of
Engineering on 15.06.2022

INTERNAL EXAMINER

EXTERNAL EXAMINER

THIAGARAJAR COLLEGE OF ENGINEERING MADURAI-15

(A Government Aided Autonomous Institution Affiliated to Anna University)



BONAFIDE CERTIFICATE

Certified that this project report "Anomalies detection and fraudulent transaction identification" is the bonafide work of "Priyanka A (18C073), Roshini S (18C083) and Mahalakshmi R (18C130)" who carried out the project work under my supervision during the Academic Year 2021-2022.

SIGNATURE

Dr.S. Mercy Shalinie, M.E., Ph.D.,

HEAD OF THE DEPARTMENT

COMPUTER SCIENCE AND ENGINEERING

THIAGARAJAR COLLEGE OF ENGG.

MADURAI - 625 015

SIGNATURE

Dr. M. Nirmala Devi, M.E., Ph.D.,

SUPERVISOR & ASSISTANT PROFESSOR

COMPUTER SCIENCE AND ENGINEERING

THIAGARAJAR COLLEGE OF ENGG.

MADURAI - 625 015

Submitted for the VIVA VOCE Examination held at Thiagarajar College of
Engineering on 15/06/2022

INTERNAL EXAMINER

EXTERNAL EXAMINER

THIAGARAJAR COLLEGE OF ENGINEERING MADURAI-15

(A Government Aided Autonomous Institution Affiliated to Anna University)



BONAFIDE CERTIFICATE

Certified that this project report “Municipal Solid Waste Segregation Using Residual Network” is the bonafide work of “RAJAMANJU B (18C074), SWATHI PRIYA G (18C111) AND VISHRUTI L B SHANKER (18C124)” who carried out the project work under my supervision during the Academic Year 2021-2022.

SIGNATURE

Dr.S. Mercy Shalinie, M.E., Ph.D.,
HEAD OF THE DEPARTMENT
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

SIGNATURE

M Sivakumar, B.E., M.E.,
SUPERVISOR & ASSOCIATE PROFESSOR
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

Submitted for the VIVA VOCE Examination held at Thiagarajar College of
Engineering on 15/06/2022

INTERNAL EXAMINER
EXTERNAL EXAMINER

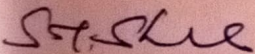
**THIAGARAJAR COLLEGE OF ENGINEERING
MADURAI-15**

(A Government Aided Autonomous Institution Affiliated to Anna University)

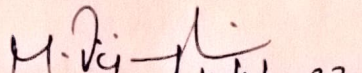


BONAFIDE CERTIFICATE

Certified that this project report “**Deep Learning-based Hybrid Lung Cancer Prediction system with IoT discussion**” is the bonafide work of **Rajanandhini H (18C075), Sunil Kumar(18C107), Varsha Nair H(18C121)** who carried out the project work under my supervision during the Academic Year 2021-2022.

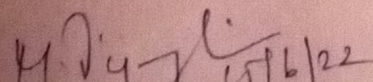

SIGNATURE

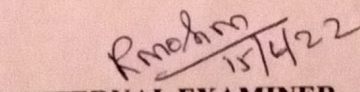
Dr.S. Mercy Shalinie, M.E., Ph.D.,
HEAD OF THE DEPARTMENT
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015


SIGNATURE / 10/6/2022

Dr.M.Vijaylakshmi M.E., Ph.D.,
SUPERVISOR & PROFESSOR
COMPUTER SCIENCE AND ENGG.
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

Submitted for the VIVA-VOCE Examination held at Thiagarajar College of
Engineering on .15.10.6.2022


INTERNAL EXAMINER


EXTERNAL EXAMINER

**THIAGARAJAR COLLEGE OF ENGINEERING
MADURAI-15**

(A Government Aided Autonomous Institution Affiliated to Anna University)



BONAFIDE CERTIFICATE

Certified that this project report "User Authentication for Smart E- Governance" is the bonafide work of "Sachithanand A(18C084),Gunasekaran A(18C032),KaruppiaSriram AI.(18C050)" who carried out the project work under my supervision during the Academic Year 2021-2022.

SIGNATURE

Dr.S. Mercy Shalinie, M.E., Ph.D.,
HEAD OF THE DEPARTMENT
COMPUTER SCIENCE AND ENGINEERING

THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

SIGNATURE

Dr. S Prasanna, M.E, Ph.D.,
SUPERVISOR & DESIGNATION
COMPUTER SCIENCE AND
ENGINEERING

THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

Submitted for the VIVA VOCE Examination held at Thiagarajar College of
Engineering on 15.6.2022

INTERNAL EXAMINER

EXTERNAL EXAMINER

**THIAGARAJAR COLLEGE OF ENGINEERING
MADURAI-15**

(A Government Aided Autonomous Institution Affiliated to Anna University)



BONAFIDE CERTIFICATE

Certified that this project report “**Performance Analysis of Machine Learning and Deep Learning Algorithms in Credit Card Fraud Detection**” is the bonafide work of “**Dhanusri B(18C023), Senthoo Leena D(18C093), Suvetha S(18C109)**” who carried out the project work under my supervision during the Academic Year 2021-2022.

SIGNATURE

Dr.S. Mercy Shalinie, M.E., Ph.D.,
HEAD OF THE DEPARTMENT
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

SIGNATURE

Dr. C. SenthilKumar M.E., Ph.D.,
ASSOCIATE PROFESSOR
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

Submitted for the VIVA VOCE Examination held at Thiagarajar College of Engineering on 15/06/2022

INTERNAL EXAMINER
EXTERNAL EXAMINER

THIAGARAJAR COLLEGE OF ENGINEERING MADURAI-15

(A Government Aided Autonomous Institution Affiliated to Anna University)



BONAFIDE CERTIFICATE

Certified that this project report "DETECTION OF NETWORK INTRUSION USING ENSEMBLE METHOD" is the bonafide work of "SNEKAVALI T (18C098), VASUNTHRA PETCHI U (18C122), SINDHU R (18C138)" who carried out the project work under my supervision during the Academic Year 2021-2022.


SIGNATURE

Dr.S. Mercy Shalinie, M.E., Ph.D.,
HEAD OF THE DEPARTMENT
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI - 625 015


SIGNATURE

Mrs.Raja Lavanya, M.E.,
SUPERVISOR & ASSISTANT PROFESSOR
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI - 625 015

Submitted for the VIVA VOCE Examination held at Thiagarajar College of

Engineering on ...15.06.2022


INTERNAL EXAMINER


EXTERNAL EXAMINER

**THIAGARAJAR COLLEGE OF ENGINEERING
MADURAI-15**

(A Government Aided Autonomous Institution Affiliated to Anna University)



BONAFIDE CERTIFICATE

Certified that this project report "SpamHEL:Spam detection using NLP-based Hybrid ensemble learning" is the bonafide work of "SUDHA M(18C104) , KEERTHANA K(18C129), SHURUTHI V (18C097)" who carried out the project work under my supervision during the Academic Year 2021-2022.

SIGNATURE

Dr.S. Mercy Shalinie, M.E., Ph.D.,
HEAD OF THE DEPARTMENT
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

SIGNATURE

Dr.M.Vijayalakshmi, M.E., Ph.D.,
SUPERVISOR & PROFESSOR
COMPUTER SCIENCE AND ENGINEERING
THIAGARAJAR COLLEGE OF ENGG.
MADURAI – 625 015

Submitted for the VIVA VOCE Examination held at Thiagarajar College of
Engineering on 15/06/2022.

INTERNAL EXAMINER

EXTERNAL EXAMINER

THIAGARAJAR COLLEGE OF ENGINEERING MADURAI-15

(A Government Aided Autonomous Institution Affiliated to Anna University)



BONAFIDE CERTIFICATE

Certified that this project report "DRIVER SAFETY TOOL" is the bonafide work of "SUGILAL M G (18C106)" who carried out the project work under my supervision during the Academic Year 2021-2022.

SIGNATURE

SIGNATURE

Dr.S. Mercy Shalinie, M.E., Ph.D.,

HEAD OF THE DEPARTMENT

COMPUTER SCIENCE AND ENGINEERING

THIAGARAJAR COLLEGE OF ENGG.

MADURAI – 625 015

Dr.C.Senthil kumar, M.E., Ph.D.,

AssociateProfessor

COMPUTER SCIENCE AND ENGINEERING

THIAGARAJAR COLLEGE OF ENGG.

MADURAI – 625 015

Submitted for the VIVA VOCE Examination held at Thiagarajar College of
Engineering on 15.06.2022

15/6/22

INTERNAL EXAMINER

15/6/22

EXTERNAL EXAMINER