

**DEPARTMENT OF COMPUTER SCIENCE AND
ENGINEERING**

PROUDLY PRESENTS

NEWSLETTER



ACADEMIC YEAR: 2022-23

ODD SEM

VISION OF THE DEPARTMENT

To develop engineers with global employability, entrepreneurship capability, research focus and social responsibility.

MISSION OF THE DEPARTMENT

- To develop internationally competent engineers in dynamic IT field by providing state-of-art academic environment and industry driven curriculum.
- To motivate and guide students to take up higher studies and establish entrepreneurial ventures.
- To enrich the department through committed and technically sound faculty team with research focus in thrust areas.
- To undertake societal problems and provide solutions through technical innovations and projects in association with the industry, society and professional bodies.



Programme Educational Objectives (PEOs)

PEO 1: Domain Expertise - Possess expertise and emerge as key players in IT integrated domains.

PEO 2: Computing Skills and Ethics - Employ computing skills to solve societal and environmental issues in an ethical manner.

PEO 3: Lifelong Learning and Research - Involve in lifelong learning and research to meet the demands of global technology.

Programme Outcomes (POs)

PO1.Engineering Knowledge : Apply the knowledge of mathematics, science, engineering fundamentals and concepts of Computer Science to solve complex engineering problems.

PO2.Problem Analysis : Identify, review literature, formulate and analyse complex engineering problems using first principles of mathematics and engineering sciences.

PO3.Design and Development of Solutions : Design and develop computing solutions for complex engineering problems with societal and environmental awareness.

PO4.Complex problem Investigation : Investigate complex problems by employing research methods to arrive at valid conclusions.

PO5.Modern Tool Usage : Evaluate and use appropriate tools and techniques in engineering activities .

PO6.Societal contribution : Follow professional engineering practice by applying contextual knowledge to assess societal and legal issues.

PO7.Environment and Sustainability : Understand and provide professional engineering solutions taking into consideration environmental and economic sustainability.

PO8.Ethics : Follow ethical principles and norms in engineering practice.

PO9.Individual and Team work : Function effectively as an individual, team member or leader in diversified environments.

PO10.Communication : Communicate effectively through various modes for all engineering activities.

PO11.Project Management and Finance : Apply Engineering knowledge and management principles for effective project management in multi-disciplinary environments.

PO12.Life-long Learning : Engage in independent life-long learning and skill development for professional and social well being.



Programme Specific Outcomes (PSOs)

PSO1. Systems Engineering: Employ software engineering principles in the design and development of efficient systems.

PSO2. Knowledge Engineering: Apply data analytics techniques for solving real world problems.

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Dr. Mahalingam College of Engineering and Technology, Pollachi

Department of Computer Science and Engineering

CSE - Newsletter

Department Activities

1. Research Seminar on “**Effective Protein Structure Analysis for the Detection of Hemophilla Disease using Big Data Analytics**” presented by Mrs.N.Sumathi, AP(SS)/CSE on 20.07.2022.



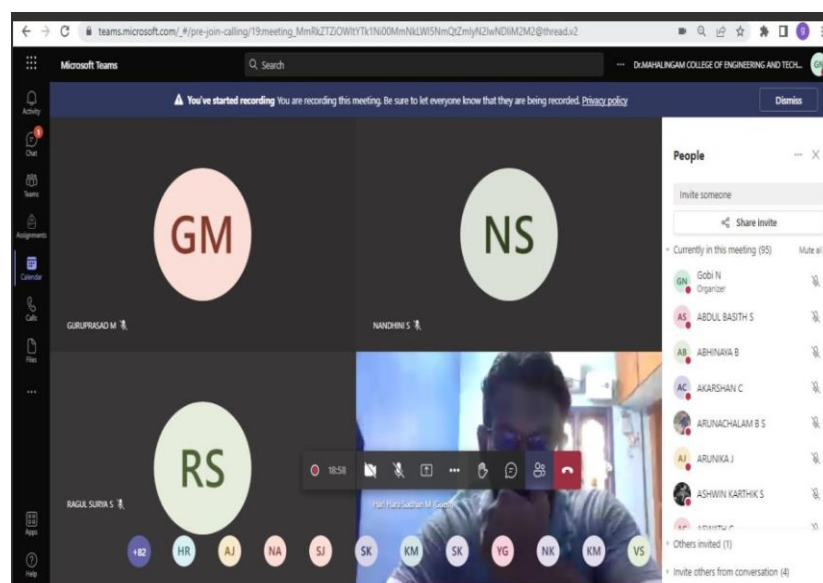
2. Research Seminar on “**A Study on Nature Inspired Optimization Algorithms for Feature Selection**” presented by Mrs.S.C.Lavanya, AP(SS)/CSE on 22.07.2022.



3. Ph.D Viva Voce on **“Optimization based Intelligent Watermarking Techniques for 3D Mesh Models”** presented by Mr.Modigara Narendra Research Scholar of **Dr.M.L.Valarmathi**, Professor/CSE on 02.08.2022



4. Department of CSE conducted an alumni interaction Programme on **“Current trends in IT Industry”** for III Year CSE students on 06.08.2022 from 12.00 P.M to 01.00 P.M. **Mr.M.Hariharasudhan** of **Infosys** acted as a Resource Person.



5. Department of CSE conducted an alumni interaction Programme on “**Career Opportunities in IT Industry**” for III Year CSE students on 13.08.2022 from 11.00 A.M. to 12.00 P.M. **Mr.G.Sooryakiran** of **VVDN Technologies, Pollachi** acted as a Resource Person.



6. Department of CSE conducted an alumni interaction Programme on “**Guidelines for Higher Studies**” for III Year CSE students on 13.08.2022 from 12.00 P.M. to 01.00 P.M. **Mr.T.Dhineshprabhu** of **National Institute of Wind Energy** acted as a Resource Person.



7. Students of III Year CSE - 'A' Section have gone for Industrial visit to **BSNL, Coimbatore** on 27.08.2022.



8. Students of III Year CSE - 'B' Section have gone for Industrial visit to **BSNL, Coimbatore** on 30.08.2022.



9. 24th Inaugural Function of DigiFlash CSE Department Association was inaugurated on 10.09.2022. **Mr.M.Hari Hara Sudhan**, Technology Lead, Infosys, Chennai acted as the chief guest for the function and interacted with the students.



10. Department of Computer Science and Engineering Organized a **One-day Workshop** on “**Extended Reality**” held on 10.09.2022. **Mr.R.Hari Hara Sudhan**, Lead Consultant, Thought Works, Coimbatore acted as the Resource Person.



11. Department of Computer Science and Engineering Organized a **Technical Talk** on “**Importance of Database in Day to Day Life**” held on 12.09.2022, Mr.Harsha Vardhan, Founder, Spot Knack acted as the resource person.



12. Department of CSE conducted a “Fun Flash Events” for II Year & III Year CSE Students and it is organized by **Digi Flash (Department Association)** on **23.09.2022**.



13. Department of CSE conducted a “**Hack Fest**” Event for II Year CSE & III Year CSE Students and it is organized by **Digi Flash (Department Association)** on **24.09.2022**.



14. Department of CSE conducted a **“Quiz Competition”** for II Year CSE Students and it is organized by **Digi Flash (Department Association)** on **27.09.2022**.



15. Research Seminar on **“A Study on Computer Aided Articulatory Model to Enhance the Performance of Speech Synthesis Systems”** was presented by **Mrs.C.Jayashree, AP(SS)/CSE** on **28.09.2022**.



16. Students of **II Year CSE – ‘B’ Section** visited **Sierra Technologies**, Coimbatore and they learnt about IoT Automation Process on 30.09.2022



17. Department of CSE organized an Alumni Interaction Programme on “**Cyber Security**” for II Year CSE students on 01.10.2022. **Mr.B.Lakshmi Nathan** (2009 to 2013 Batch), Cyber Security Ops Manager of Fiserv, Canada acted as a Resource Person.



18. Department of CSE organized an Alumni Interaction Programme on “**Industry Expectations from Freshers**” for III Year and IV Year CSE students on 07.10.2022. **Mr.K.Abiram** of Mr.Cooper - Chennai, **Mr.V.Karunai Arasu** of HCL - Chennai, **Ms.V.Nandhini** of Qess Corp and **Ms.S.Nivetha**, Cyber Security Analyst of HPCL acted as a Resource Persons.



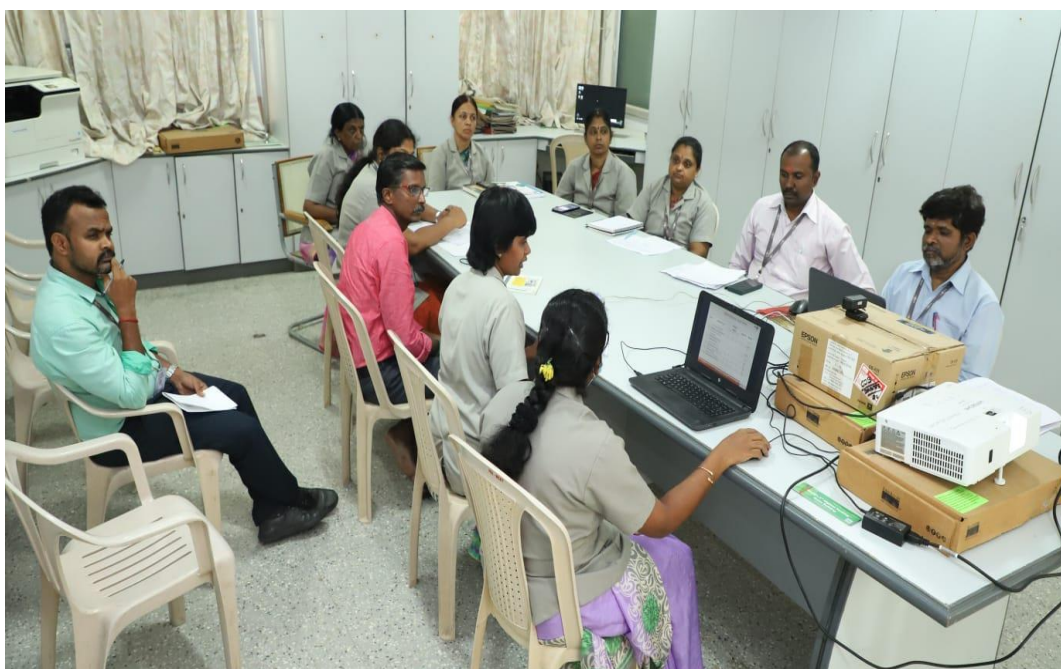
19. Department of CSE organized an Alumni Interaction Programme on “**Current Industry Trends**” for II Year CSE students on 08.10.2022. **Mr.Harshit Pramod**, Technical Support Engineer of Infoworks, **Mr.M.Ram Prasad**, Data Scientist of Bosch Global Software Technologies, **Mr.C.Rakesh**, SX/EIA of Bosch Global Software Technologies, and **Mr.R.Sunilsamson** acted as a Resource Persons.



20. Department of CSE conducted a “Workshop on Java Programming” for II Year CSE students and it is organized by **Digi Flash (Department Association)** on **15.10.2022**.



21. **16th BOS meeting of CSE Department** was held on **18.10.2022** from 03.00 P.M to 04.30 P.M



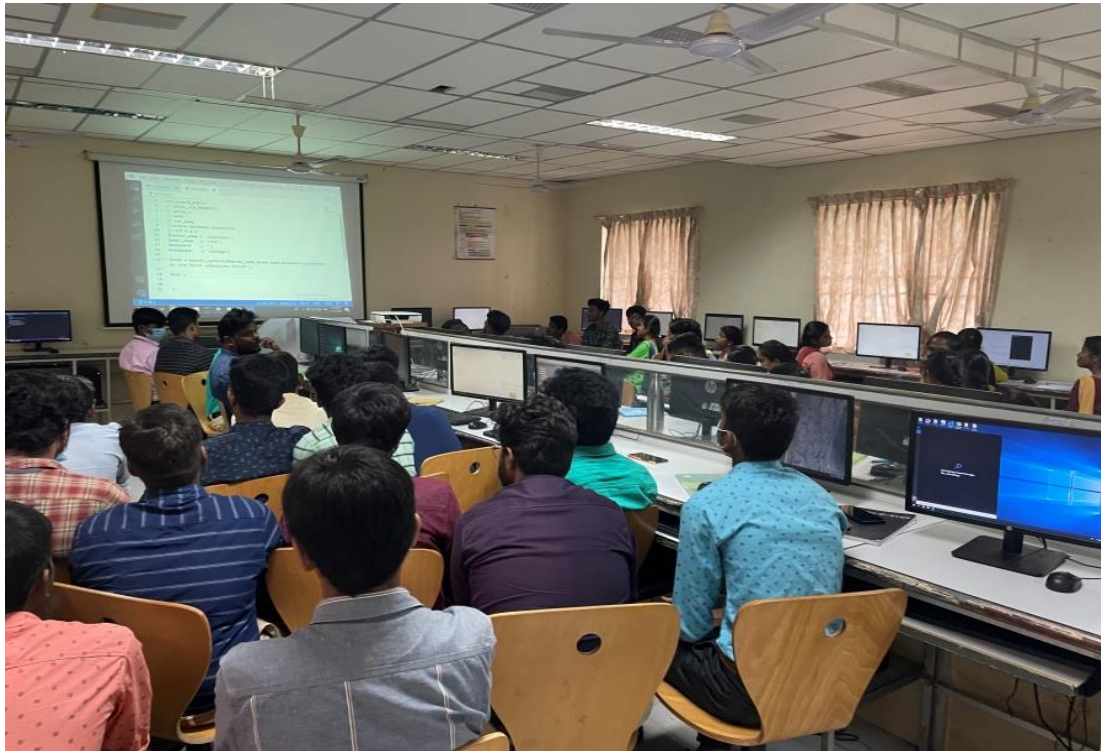
22. Students of **II Year CSE – ‘A’** Section have gone Industrial Visit to **Sierra Technologies, Coimbatore** on 03.11.2022 and they learnt about IoT Automation Process.



23. Department of CSE Conducted a **One Credit Course** on “**Web Designing Using PHP & JQuery**” for 65 students of **II Year CSE – ‘A’** Section on 11.11.2022 **Mr.S.K.Dhineshkumar, Senior Technical Lead-Product Development of Lantrasoft Private Limited, Coimbatore** acted as a Resource Person.



24. Department of CSE Conducted a **One Credit Course** on “**Web Designing Using PHP & JQuery**” for 65 students of II Year CSE – ‘B’ Section on 11.11.2022. **Mr.Cheran Sengodan, Senior Full Stack Developer of Sensiple, Chennai** acted as a Resource Person.



25. Department of CSE conducted a “**Two-day Workshop on Amazon Web Services**” for III Year CSE students and it is organized by Digi Flash (Department Association) on 17.11.2022 and 18.11.2022. **Mr A.Gobinath** Head Training & Delivery of Xplore IT Corp, Coimbatore acted as a Resource Person.



26. Department of CSE conducted a “**Two-day Workshop on Cyber Security**” for III Year CSE students and it is organized by ISTE Student’s Chapter and Digi Flash (Department Association) on 17.11.2022 and 18.11.2022. **Mr S.Vijay Krishna** Assistant General Manager of BSNL, Tirunelveli acted as a Resource Person.



27. Students of IV Year CSE – ‘A’ Section visited **IROID Technologies**, Kochi and they learnt about Web and Mobile App Development on 17.11.2022



28. Department of CSE conducted a **Parents meeting** on 26.11.2022. Parents of **II Year CSE students** attended the meeting.



Dr.Mahalingam College of Engineering and Technology, Pollachi – 642003

Department of Computer Science and Engineering

CSE Newsletter

Student Achievements

1. **Selvan.Mohamed Thouheeth Kabir**, student of III Year CSE has successfully completed an online certification course on **“Start the UX Design Process: Empathize, Define and Ideate”** offered by Coursera.



2. **Selvan.A.Maha Dhanush**, student of III Year CSE has successfully completed an online certification course on **“Introduction to Web Development with HTML, CSS, JavaScript”** offered by Coursera.



3. **Students of III Year CSE** have participated in **Smart India Hackathon 2022- Software Edition** – Held at Dr.BC Roy Engineering College, Durgapur, West Bengal on 25.08.2022 & 26.08.2022 and **Won First Prize** for the Problem Statement named **“Drone Neutralization Technique”**



4. **Students of IV Year CSE** have participated in **Smart India Hackathon 2022- Software Edition** - Held at Excel Engineering College, Komarapalayam held on 25.08.2022 & 26.08.2022 for the Problem Statement named **“Every Classroom a Digital Classroom”**



5. **Students of III Year CSE** have attended the webinar on **“Neoteric Frontiers in Cloud, Edge and Quantum Computing”** organized by AICTE on 18.08.2022



6. **Selvan.R.Roshan, Selvan.M.Bharathi Vasan, Selvan.A.Maha Dhanush, Selvan.G.Umesh Krishnan G and Selvan.S.Sri Dhanvarsh** Students of III Year CSE have participated in “**iTech Hackfest 2022 – A National Level Hackathon**” held at PSG Institute of Applied Research from 25.08.2022 to 27.08.2022



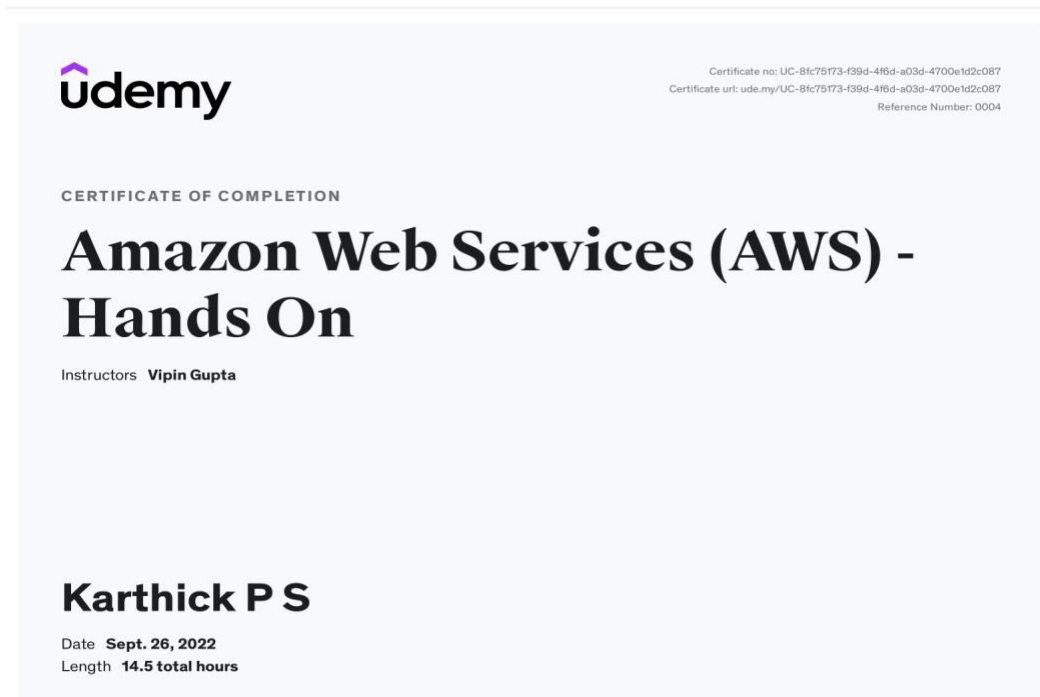
7. **Selvan.P.Gowtham**, Student of II Year CSE, has successfully completed an online certification course on “**Google Cloud Platform (GCP) Fundamentals for Beginners**” offered by UdeMy



8. **Selvi.Reena Sajad Hyder** and **Selvi.Reemaa Sajad Hyder** Students of IV Year CSE have participated and **Won Cash prizes in Madurai Marathon 2022** held on 28.08.2022.



9. **Selvan.P.S.Karthick**, Student of II Year CSE, has successfully completed an online certification course on “**Amazon Web Services (AWS) – Hands on**” offered by Udemy



10. **Selvi.C.Shobika**, Student of II Year CSE, has successfully completed Internship on “Web Development” from 11.09.2022 to 08.11.2022 offered by Rinex



11. **Selvi.K.Monika**, Student of II Year CSE, has participated and successfully completed the “**Web Development**” program at Rinex in association with **E-Cell – IIT Bhubaneswar** from 11.09.2022 to 08.11.2022



12. **Selvi.M.Anbu Dharshini**, Student of II Year CSE, has participated and successfully completed the “**Web Development**” program at Rinex in association with **E-Cell – IIT Bhubaneswar** from 11.09.2022 to 08.11.2022



13. **Selvi.T.Sridharini**, Student of II Year CSE, has participated and successfully completed the “**Web Development**” program at Rinex in association with **E-Cell – IIT Bhubaneswar** from 11.09.2022 to 08.11.2022



14. **Selvi.M.Sanjana** student of II Year CSE has participated in the event “**Industrial IoT and Automation**” organized by Department of Mechatronics Engineering, Sri Krishna College of Engineering and Technology, Coimbatore on 15.09.2022



15. **Selvi.D.Swetha**, student of II Year CSE has participated in the event “**Industrial IoT and Automation**” organized by Department of Mechatronics Engineering, Sri Krishna College of Engineering and Technology, Coimbatore on 15.09.2022



16. **Selvan.M.M.Premgaanth** and **Selvan.M.Karthick** students of II Year CSE have participated and **Secured First Place** in the event “**Today’s Wastage is Tomorrow’s Shortage**”, Poster Presentation organized by KCT Business School, Coimbatore on 28.09.2022



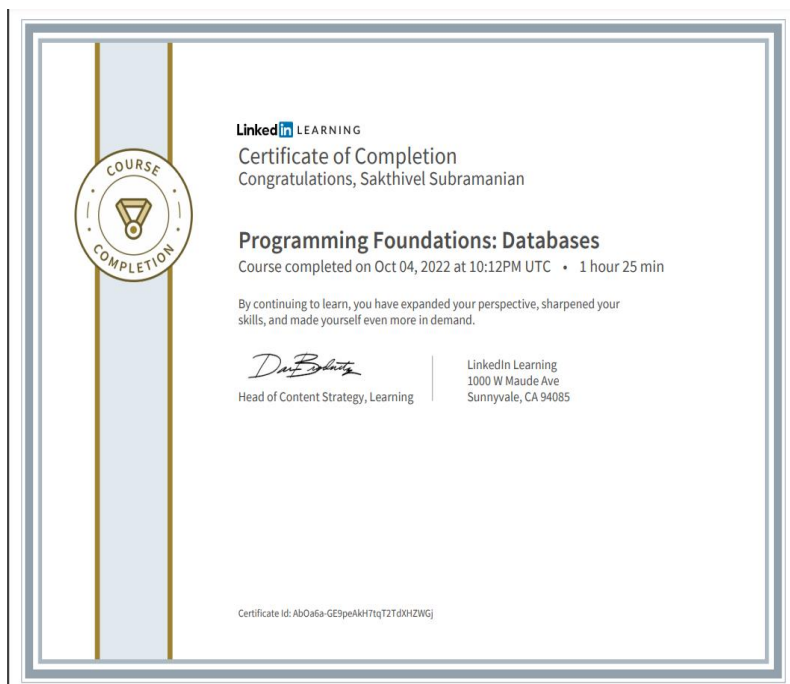
17. **Selvan.S. Divya Pravin** and **Selvan.A.Rahul Krishnan** students of II Year CSE have participated and **Secured Second Place** in the event **“Today’s Wastage is Tomorrow’s Shortage”**, Poster Presentation organized by KCT Business School, Coimbatore on 28.09.2022



18. **Selvi.S.Hari Priya**, Student of II Year CSE, has successfully completed an online certification course on **“Android Application Development”** offered by Great Learning on September 2022



19. **Selvan.S.Sakthivel**, Student of II Year CSE, has successfully completed an online certification course on “**Programming Foundations: Databases**” offered by LinkedIn Learning on 04.10.2022



20. **Selvan. R.Logesh Krishna, Selvan. S.Subhaanandh, Selvan.M.Vishnu, Selvan.M.Karthick, Selvan.M.Karthikeyan and Selvan.B.Deepak** students of III Year CSE have participated in a National Level technical Symposium XPLORE'22 organized by Loyola-ICAM College of Engineering and Technology, Chennai on 08.10.2022



21. **Selvan.M.Karthick** and **Selvi.K.Abinandha** students of III Year CSE have participated and **Won Second Prize** in a Shot in the Dark Event at a National Level Technical Symposium TECHFINIX'22 organized by Paavai Engineering College, Namakkal on 20th and 21st October 2022.



22. **Selvan.R.Rahul** and **Selvi.S.Sahithya** students of III Year CSE have participated and **Won First Prize** in a Interlingual Warble Event at a National Level Technical Symposium TECHFINIX'22 organized by Paavai Engineering College, Namakkal on 20th and 21st October 2022.



23. **Selvan.M.Karthick** and **Selvan.B.Deepak** students of III Year CSE have participated and **Won Second Prize** in Paper Presentation Event at a National Level Technical Symposium TECHFINIX'22 organized by Paavai Engineering College, Namakkal on 20th and 21st October 2022.



24. **Selvan.M.Karthick** student of III Year CSE has participated and **Won Second Prize** in Pace Predator Event at a National Level Technical Symposium TECHFINIX'22 organized by Paavai Engineering College, Namakkal on 20th and 21st October 2022.



25. **Selvan.B. Shughash** and **Selvan.U. Mohammedrasheed** students of II Year CSE have participated in the Code Cracking Event at 12th National Level Technical Symposium CRYOSAT'22 organized by Nandha College of Technology, Erode on 21st October 2022.



26. **Selvan.S.Sakthivel**, Student of II Year CSE, has successfully completed an online certification course on “**Learning SQL Fundamentals**” offered by LinkedIn Learning on 23.10.2022



27. **Selvan.G.Nandan**, student of III Year CSE has participated in the One day Workshop on “**Frontiers of Blockchain Technology**” organized by Sri Ramakrishna Engineering College, Coimbatore on 31st October 2022.



28. **Selvan.G.Srihari**, student of II Year CSE has Successfully Completed the NPTEL course on “**Data Base Management System**” and awarded with **Elite with Silver Medal**.



NPTEL Online Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

SRIHARI G

for successfully completing the course

Data Base Management System

with a consolidated score of **76** %

Online Assignments	22.29/25	Proctored Exam	54/75
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Total number of candidates certified in this course: **3478**

Aug-Oct 2022
(8 week course)






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No. of credits recommended: 2 or 3

29. **Selvan. V.Sharan Prasanth**, student of III Year CSE has participated and secured **First Place** in the **Singles-National level Badminton Championship** held on 23.11.2022 at Mandav, Madhya Pradesh.



30. **Selvan.S.Aswath**, student of II Year CSE has participated in **Analogy-O-Mania** Event at a National Level Techno Cultural Fest EKNA'22 organized by Anna University Regional Campus, Coimbatore on 04th November 2022.



31. **Selvan.P.Gowtham** and **Selvan.M.M.Premgaanth**, students of II Year CSE have participated and **Won First Prize** in the event **Code Triathlon** at A National Level Technical Fest INVENTE'22 organized by SSN College of Engineering and Shiv Nadar University, Chennai on 03rd and 04th November 2022



32. **Selvan. M.Ashwin** and **Selvan. M.Jagadeesh**, students of III Year CSE have participated and **Won Second Prize** in the event **Code Triathlon** at A National Level Technical Fest INVENTE'22 organized by SSN College of Engineering and Shiv Nadar University, Chennai on 03rd and 04th November 2022



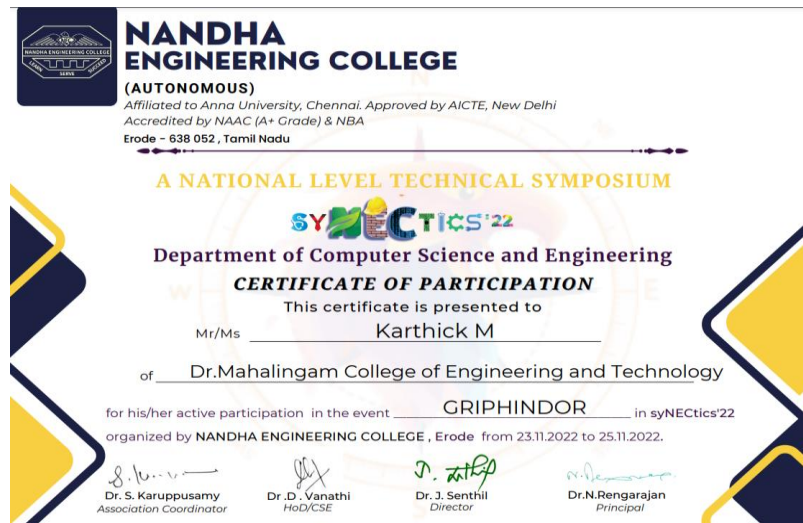
33. **Selvi. D.Swetha**, student of II Year CSE has participated in One Day International Level seminar on “**Deep Learning Techniques on Medical Image Classification**” organized by M.Kumarasamy College of Engineering, Karur held on 11.11.2022



34. **Selvan.M.M.Premgaanth**, student of II Year CSE has participated in the Workshop “**UI/UX Design**” organized by Nandha Engineering College, Erode on 23.11.2022



35. **Selvan.M.Karthick Selvan.S. Divya Pravin and Selvan. A.Rahul Krishnan**, students of II Year CSE have participated in the event “GRIPHINDOR” organized by Nandha Engineering College, Erode on 23.11.2022



36. **Selvan.S.Divya Pravin**, student of II Year CSE has participated in the Workshop “**UI/UX Design**” organized by Nandha Engineering College, Erode on 23.11.2022



37. **Selvan.A.Rahul Krishnan**, student of II Year CSE has participated in the Workshop “**UI/UX Design**” organized by Nandha Engineering College, Erode on 23.11.2022



38. **Selvan.M.Karthick**, student of II Year CSE have participated in the Workshop “**UI/UX Design**” organized by Nandha Engineering College, Erode on 23.11.2022



39. **Selvan.R. Sanjeevdharan** and **Selvan.J. Mohammad Faisal** students of II Year CSE have participated and **Won Third Prize** in the event **Android Campus Fest 2022** organized by Sahrdaya College of Engineering & Technology, Thrissur Kerala on 02nd December 2022.



40. **Selvan.S.Aswath, Selvan.S. Arunkumar, Selvan.S.R.Tharan, Selvan.P.M. Bhuvanesh Kumar, Selvan.B. Shughash Selvan.U. Mohammedrasheed, Selvan.M. Thiruppathi Selvan.R. Sanjeevdharan and Selvan.J. Mohammad Faisal** students of II Year CSE have participated in the event **Android Campus Fest 2022** organized by Sahrdaya College of Engineering & Technology, Thrissur Kerala on 02nd December 2022.



Dr.Mahalingam College of Engineering and Technology, Pollachi – 642003

Department of Computer Science and Engineering

CSE Newsletter

Faculty Achievements

1. **Mr.S.Senthil Prabhu, AP/CSE** has participated and successfully completed the Five Days Online FDP on “**Recent Trends in Cyber Security & Blockchain Technology**” organized by Department of Information Technology, Oriental Institute of Science and Technology, Bhopal from 28.06.2022 to 02.07.2022



2. **Ms.G.Gayathri, AP/CSE** has participated and successfully completed the Five Days Online FDP on “**Recent Trends in Cyber Security & Blockchain Technology**” organized by Department of Information Technology, Oriental Institute of Science and Technology, Bhopal from 28.06.2022 to 02.07.2022



3. **Mr.K.Prabhu, AP/CSE** has participated and successfully completed the Five Days Online FDP on “**Recent Trends in Cyber Security & Blockchain Technology**” organized by Department of Information Technology, Oriental Institute of Science and Technology, Bhopal from 28.06.2022 to 02.07.2022



4. **Ms.P.Banumathi, AP/CSE** has participated and successfully completed the Five Days Online FDP on “**Recent Trends in Cyber Security & Blockchain Technology**” organized by Department of Information Technology, Oriental Institute of Science and Technology, Bhopal from 28.06.2022 to 02.07.2022



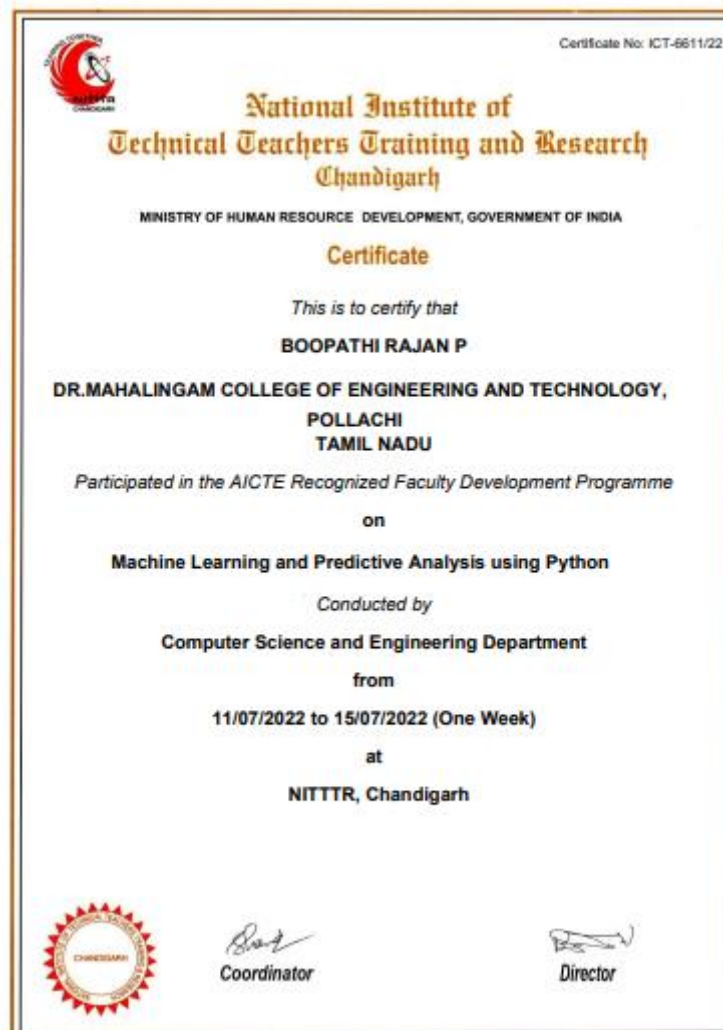
5. **Mr.V.Eswaramurthy, AP/CSE** has participated and successfully completed the Five Days Online FDP on “**Recent Trends in Cyber Security & Blockchain Technology**” organized by Department of Information Technology, Oriental Institute of Science and Technology, Bhopal from 28.06.2022 to 02.07.2022



6. **Mr.V.Eswaramurthy, AP/CSE**, has participated and successfully completed the 10 – Days National FDP on “**Unleashing Emerging Research Trends and Advancements in Computer Science**” from 04th July to 14th July, 2022 Organized by School of Computer Science and Engineering, VIT-AP University, Amaravati.



7. **Mr.P.Boopathirajan, AP(SS)/CSE**, has participated and successfully completed the Five Days FDP on “**Machine Learning and Predictive Analysis using Python**” from 11.07.2022 to 15.07.2022 Organized by Department of Computer Science and Engineering, NITTTR, Chandigarh



8. **Dr.A.Noble Mary Juliet, Assoc.Prof** has participated in AWS Builders Online Series on 14.07.2022 organized by Amazon.



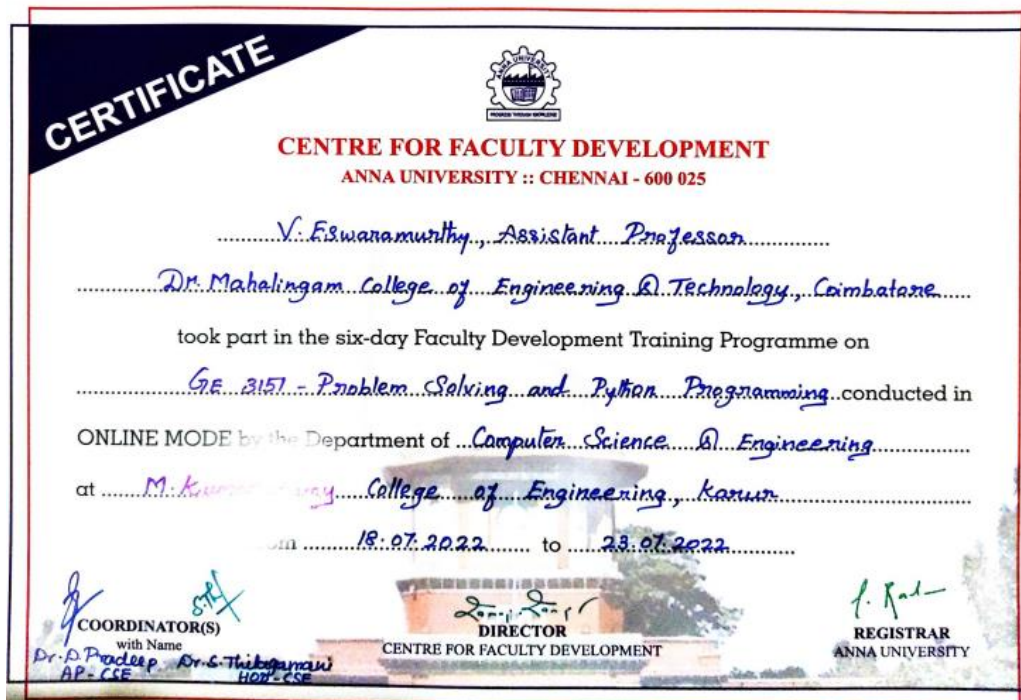
CERTIFICATE OF ATTENDANCE

THIS CERTIFICATE IS AWARDED TO

Noble Mary Juliet

ON 14 JULY, 2022

9. **Mr.V.Eswaramurthy, AP/CSE**, has participated and successfully completed the Six Days National FDP on “**GE3151 – Problem Solving and Python Programming**” from 18th July to 23rd July, 2022 Organized by Department of Computer Science and Engineering, M.Kumarasamy College of Engineering, Karur.



10. **Mr.K.Prabhu, AP/CSE**, has participated and successfully completed the Six Days National FDP on “**GE3151 – Problem Solving and Python Programming**” from 18th July to 23rd July, 2022 Organized by Department of Computer Science and Engineering, M.Kumarasamy College of Engineering, Karur.



11. **Mr.S.Senthil Prabhu, AP/CSE**, has participated and successfully completed the Six Days National FDP on “**GE3151 – Problem Solving and Python Programming**” from 18th July to 23rd July, 2022 Organized by Department of Computer Science and Engineering, M.Kumarasamy College of Engineering, Karur.



12. **Dr.G.Anupriya, Professor & Head of CSE** has published a paper titled “**Twitter Bot Detection using one-class classifier and Topic Analysis**” in Inventive Systems and Control Proceedings of ICISC 2022 , Lecture Notes in Networks and Systems, Vol 436, pp 789–799, Springer, Singapore, August 2022.

Springer Link Search Log in

Inventive Systems and Control pp 789–799

Twitter Bot Detection Using One-Class Classifier and Topic Analysis

Anupriya Baikumar C. Rakesh, M. Kalavani & G. Anur

Conference paper | [First Online: 02 August 2022](#)

133 Accesses

Part of the [Lecture Notes in Networks and Systems](#) book series (LNNS, volume 436)

Abstract

Social media has emerged as the primary means of information sharing over the last few years. Twitter is a popular social media platform. However, increasingly twitter bots which are autonomous software agents are used to spread misinformation, false propaganda and influence public opinion. This paper outlines the design and development of a machine learning-based approach for classifying a twitter account as a bot or genuine user account. A one-class classifier coupled with account-based and tweet-based features has yielded an F-measure of

13. **Dr.N.Gobi, AP(SG)/CSE** has published a paper titled “**A Hybrid Mayfly-Aquila Optimization Algorithm Based Energy-Efficient Clustering Routing Protocol for Wireless Sensor Networks**” in Journal of Sensors "Vol 22, Issue : 17, pp 6405-6430, EISSN 1424-8220



Article

A Hybrid Mayfly-Aquila Optimization Algorithm Based Energy-Efficient Clustering Routing Protocol for Wireless Sensor Networks

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² Department of Data Science, CMR Technical Campus, Hyderabad 501401, Telangana, India

³ Telecommunication Engineering Department, University of Jaén, 23700 Linares, Spain

⁴ Faculty of Applied Mathematics, Silesian University of Technology, 44-100 Gliwice, Poland

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Abstract: In recent times, Wireless Sensor Networks (WSNs) are becoming more and more popular and are making significant advances in wireless communication thanks to low-cost and low-power sensors. However, since WSN nodes are battery-powered, they lose all of their autonomy after a certain time. This energy restriction impacts the network's lifetime. Clustering can increase the lifetime of a network while also lowering energy use. Clustering will bring several similar sensors to one location for data collection and delivery to the Base Station (BS). The Cluster Head (CH) uses more energy when collecting and transferring data. The life of the WSNs can be extended, and efficient identification of CH can minimize energy consumption. Creating a routing algorithm that considers the key challenges of lowering energy usage and maximizing network lifetime is still challenging. This paper presents an energy-efficient clustering routing protocol based on a hybrid Mayfly-Aquila optimization (MFA-AOA) algorithm for solving these critical issues in WSNs. The Mayfly algorithm is employed to choose an optimal CH from a collection of nodes. The Aquila optimization algorithm identifies and selects the optimum route between CH and BS. The simulation results showed that the proposed methodology achieved better energy consumption by 10.22%, 11.26%, and 14.28%, and normalized energy by 9.56%, 11.78%, and 13.76% than the existing state-of-art approaches.

Keywords: Aquila optimization algorithm; cluster head; mayfly; routing protocol; wireless sensor networks



Citation: Natesan, G.; Konda, S.; de Prado, R.P.; Wozniak, M. A Hybrid Mayfly-Aquila Optimization Algorithm Based Energy-Efficient Clustering Routing Protocol for Wireless Sensor Networks. *Sensors* **2022**, *22*, 6405. <https://doi.org/10.3390/s22176405>

Academic Editor: Hsiao-Chun Wu

14. **Ms.B.Suganya, AP/CSE** has published a paper titled “**A Low-Cost Monitoring Design for Photovoltaic System Using IoT**” in International Journal of Scientific Research & Engineering Trends Vol 8, Issue 4, pp : 1949-1951, ISSN (Online): 2395-566X



International Journal of Scientific Research & Engineering Trends
Volume 8, Issue 4, July-Aug-2022, ISSN (Online): 2395-566X

A Low-Cost Monitoring Design for Photovoltaic System Using IOT

Peniel David, R. Krishna Prasath, S. Pranesh Supervisor, Mrs. B. Suganya

Department of Computer Science Engineering,
Dr. Mahalingam College of Engineering and Technology,
Coimbatore.

Abstract- Internet of Things (IoT) technology in photovoltaic (PV) systems is an important aspect for monitoring, supervising and performance evaluation. The main aim of this system is to design a low-cost monitoring system for the maximum power point tracking in photovoltaic (PV) systems. In addition, the monitored real time data will be sent to the user's mobile app through IoT. The LDR is used to find the light intensity of sun and makes the photovoltaic cell to turn to the respected side. Based on the monitored data the users can identify the working of the system.

Keywords- Photovoltaic System, Renewable Energy, Solar Panels.

15. **Dr.M.Pandi, Associate Professor/CSE, Dr.N.Senthilmasamy, Associate Professor/CSE,** has published a paper titled “**Machine Learning Techniques for Real Estate Prediction**” in Positif Journal, Vol 22, Issue 8, pp 308-313, ISSN No: 0048-4911

Positif Journal

Issn No : 0048-4911

Machine Learning Techniques for Real Estate Prediction

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Abstract. Prediction algorithms are now widely used in almost every field. The demand for forecasting has increased. It became more popular and useful as a result of this tool. As a result, the majority of us choose for forecasting, the majority of the time. However, there are certain exceptions. Most of us don't consider the disadvantages, the section that was scheduled to take place following the prognosis. The forecast is to come up with a rough estimate, however are also able to make advantage of the anticipated outcome for future use. The more we use it, the better. Our final result will be of projected value. achieve great usefulness in the future. People are growing increasingly interested in learning new things, about the value of real estate and their predictions. Among them, the value of real estate stands out because it is one of the fixed assets. Real estate is concerned with land, which is the most important resource for everyone. The value of land and houses will be directly tied to the growth and decline of the country's economy. Economic growth will be forecasted by taking real estate into account as one of its characteristics. The home is the place where we all live, so it is a requirement for everyone who lives on this planet. For a youngster, the environment in which they live and how they are raised will influence their development of positive attributes. While estimating its worth, the environment and surroundings are also important considerations. However, the majority of us will just assess the building's exterior aspects, while the true ups and downs in price values are determined by the additional surrounding environments that are located nearby. The main goal of the concept is to identify some of the options after making a successful prediction in addition to estimating the price. As a result, the forecast will not only be the end of the notion, but also the start of a new one.

Keywords: Property prediction, Find the possibilities of new insights, Machine Learning methods.

16. **Mr.K.Prabhu, AP/CSE,** has participated and successfully completed the Five Days Online FDP on “**Designing and Modelling of IoT, AI & ML Systems**” organized by AICTE, ATAL Academy, Arm Education and STMICROELECTRONICS from 01.08.2022 to 05.08.2022



17. **Dr.N.Senthil Madasamy, Assoc.Prof/CSE** has participated in the **IIC regional Meet** held at PSNA College of Engineering and Technology, Madurai on 08.08.2022



18. **Mr.K.Prabhu, AP/CSE** has participated and successfully completed the one week FDP on “**Amazon Web Services**” organized by M.Kumarasamy College of Engineering, Karur in collaboration with AICTE and Brainovision Solutions India Pvt Ltd from 22.08.2022 to 27.08.2022



19. **Mr.K.Radha, AP/CSE** has participated and successfully completed the Short Term Training Programme on “Data Science” organized by Department of Information Technology, Vivekanandha College of Technology for Women, Namakkal from 22.08.2022 to 27.08.2022



20. **Dr.M.Pandi, Associate Professor/CSE**, has published a paper titled “Cipher Text Policy Attribute Based Encryption Model for Data Protection in Cloud Computing Environment” in Positif Journal, Vol 22, Issue 9, pp 243-249, ISSN No: 0048-4911

Cipher Text Policy Attribute Based Encryption Model for Data Protection in Cloud Computing Environment

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Abstract: Cloud computing is a type of data storage that enables customers to access their information from any location. The cloud service provider offers a number of platforms. Software as a Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service are a few examples (IaaS). Even if cloud service providers may not always provide proper security to keep up with technological changes, cloud computing is projected to be an updated technology. The proxy was used to restore the data if it got corrupted, and the data was saved securely on the cloud. The security and integrity objectives were thus accomplished. This is enhanced by the addition of effective file retrieval by a third-party user Data owners encrypt the data files and provide each user a unique set of access rights to their data. For file encryption, the data owner provides a secret key (SK). Data owner offers file description and user public key selection. The file is encrypted with SK before being sent to the user. Data will be encrypted using a public key (PK) and SK. Data is encrypted by the data owner using symmetric key (AES), which encrypts and decrypts data using the same key. The security of cloud computing is provided for consumers through encrypted data in the cloud. In order to protect the data from potential attackers, the data owner should encrypt the data before uploading it to the cloud server. We propose attribute based Encryption model for cloud-based data protection. The proposed approach offers a solution to several cloud security challenges, such as data protection from violations and protection from users who masquerade as authorized users but are actually not, which has a negative impact on cloud security.

Keywords- Cloud Computing, Security, Third Party Auditor (TPA), Proxy, RSA Algorithm, Regeneration, Multiuser Authentication, PDP, ID-PDP, CP-ABE.

21. **Mr.K.Prabhu**, Assistant Professor/CSE has published a paper titled “**Integrating Machine Learning and Quantum Annealing to Detect Online Credit Card Fraud**” in Journal of Xidian University "Vol 16, Issue 9,pp 58-67, ISSN No:1001-2400

Integrating Machine Learning and Quantum Annealing to Detect Online Credit Card Fraud

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Abstract

The usage of machine learning algorithm in the detection of fraudulent transactions is becoming more common. Most application systems, on the other hand, only catch fraudulent activity after it has already taken place, rather than in real time. Detecting fraud is difficult because there are considerably fewer erroneous transactions than legitimate ones. This data imbalance necessitates methods other than machine learning to handle it. Quantum machine learning (QML) has been used to develop a detection framework, which was then, implemented using SVMs supplemented with quantum annealing solvers. A total of twelve machine learning algorithms have been applied to test QML's detection capability, and their results have been compared to those of the QML application on two datasets: a non-time series of Israeli credit card transactions and a time series of Israeli bank loan applications. The results reveal that, using the bank loan dataset, the quantum augmented SVM overtakes the others in relationships of both speed and accuracy. The detection accuracy is comparable to those that use Israel credit card transaction data. By the detection time can be greatly improved for both datasets by using feature selection, although the increase in accuracy is minor. QML applications on time series data with significant imbalance have been shown to have promise, whereas standard machine learning methodologies have been shown to have worth when dealing with non-time series data, as these results show. This research sheds light on how to choose the best technique for various datasets while keeping in mind the trade-offs between speed, accuracy, and price.

Index Terms: Fraud detection, deep learning, machine learning, CCF.

22. **Dr.N.Gobi**, AP(SG)/CSE has published a paper titled “**Spam Review Identification Metrics for Distinguishing the Honest Reviews from Fake Reviews**” in Journal of PERIODICO di MINERALOGIA Vol 91, Issue 5, ISSN : 0369-8963, pp 513-544

Spam Review Identification Metrics for Distinguishing the Honest Reviews from Fake Reviews

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MRS.K.BALASARANYA,

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Department of Computer Science and Engineering,
R.M.D. Engineering College,

ABSTRACT:

Sentiment Analysis (SA) systems are quite popular nowadays since most people trust them to make decisions on products, services, and new analytics, among other things, based on the reviews expressed by the end users. Customers will employ sentiment analysis tools to select new products from a variety of options available. Manufacturers can use the implemental system to know about their products' strengths and weaknesses.

At present the end user's point is that, many sponsors post the irrelevant or fake reviews about certain products to increase or decrease its market share among others. Sentiment analysis systems have a difficult time displaying methodology to identify whether each review is either honest or spam and also to know whether it was made by individual sponsors or sponsor groups after experiencing the products.

The suggested system will provide solution to the problem faced above by utilizing Text pre-processing as the best place to start when it comes to increasing the overall effectiveness of sentiment analysis systems. Subsequently, an innovative spam review detection approach namely Spam Review Identification Metrics (SRIM) is implemented based on several factors determined through review level and reviewer level characteristics to classify the system as honest or fake reviews in the Review dataset. Multilayer Perceptron (MLP) classifier is used to identify the given review as spam or honest and performs well when compared to other classifiers like Naive Bayes and Decision Tree techniques. An interesting observation is that, although the performance of positive sentiment identification by the Naive Bayes and Decision Tree outperforms well by 2.28% and 1.45% more than MLP. However, MLP produced good results for negative sentiment related reviews by 2.35% and 4.37 % more than NB and DT methods.

23. **Mr.K.Prabhu, Mr.S.Senthil Prabhu** Assistant Professor/CSE, have presented a paper titled “Automatic Speech Emotion Recognition using Multivariant Linear Regression” in International Conference on Computational Linguistics and Natural Language Processing (ICCLNLP’2022) Organized by Dr.N.G.P. Institute of Technology, Coimbatore in association with SERB on 14.09.2022 and 15.09.2022



24. **Mr.V.Eswaramurthy, AP/CSE** has participated in the NAAC Sponsored Two days Seminar on **“The Importance of Outcome Based Education in a Modern Educational Setup** from 21st and 22nd September, 2022 Organized by Hindusthan Institute of Technology, Coimbatore



25. **Ms.K.Radha, AP/CSE** has participated in the NAAC Sponsored Two days Seminar on **“The Importance of Outcome Based Education in a Modern Educational Setup”** from 21st and 22nd September, 2022 Organized by Hindusthan Institute of Technology, Coimbatore



26. **Dr.A.Noble Mary Juliet, Assoc.Prof/CSE** has participated and successfully completed the Professional Development Programme on “**Implementation of NEP – 2020 for University and College Teachers**” organized by Indira Gandhi National Open University, New Delhi from 21.09.2022 to 29.09.2022



27. **Dr.A.Noble Mary Juliet, Assoc. Prof/CSE** has participated in Tamil Nadu State Government Sponsored FDP on “**Next Generation Cyber Security through Blockchain**” organized by Government College of Engineering, Tirunelveli from 19.09.2022 to 23.09.2022



28. **Ms.T.Gowrisankari, AP/CSE** has participated in the Naan Mudhalvan Training of Trainers Program for “Augmented Reality, Virtual Reality & Metaverse Development” held between 19.09.2022 to 22.09.2022



29. **Dr.J.Bhavithra, AP(SG)/CSE** has participated in Tamil Nadu State Government Sponsored FDP on “**Next Generation Cyber Security through Blockchain**” organized by Government College of Engineering, Tirunelveli from 19.09.2022 to 23.09.2022



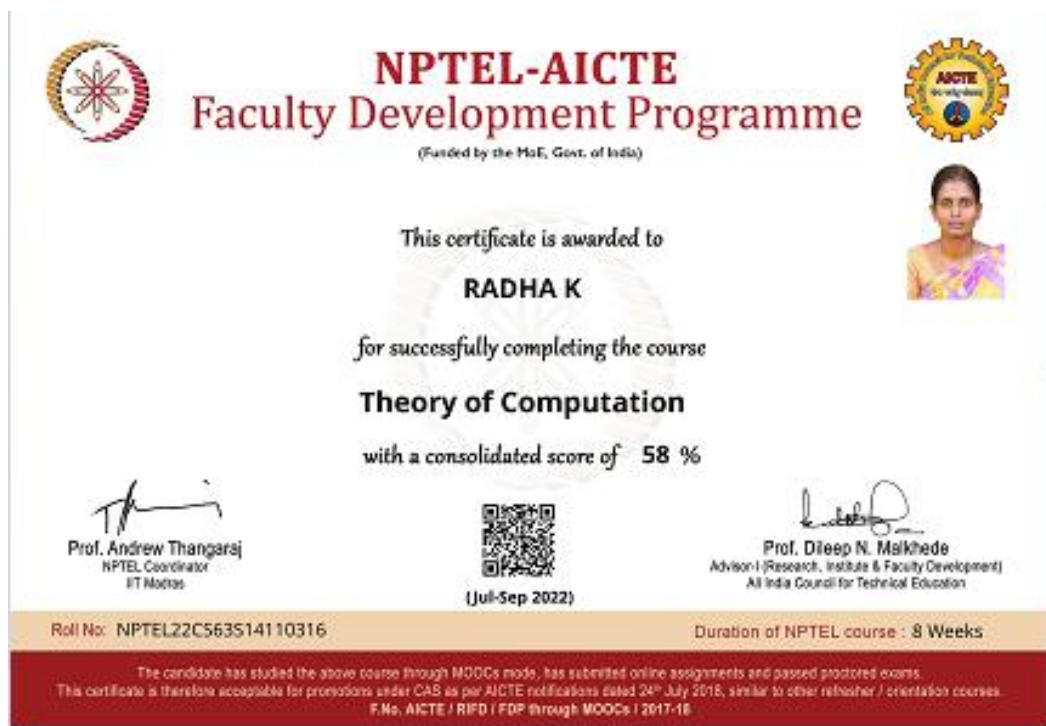
30. **Mr.V.Eswaramurthy, AP/CSE** has participated and successfully completed a Five Days National Level Online FDP on “**Research Trends and Technologies in Industry 4.0**” organized by KKR & KSR Institute of Technology and Sciences from 26.09.2022 to 30.09.2022



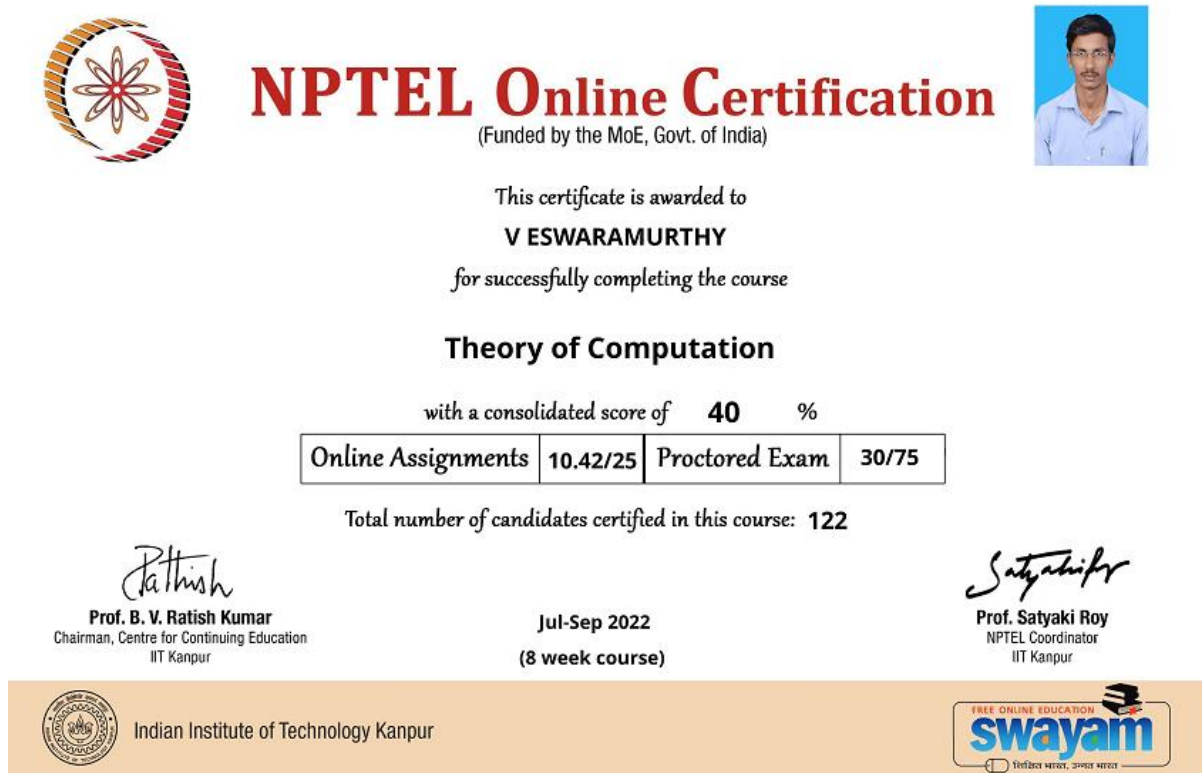
31. **Ms.K.Radha, AP/CSE** has participated and successfully completed a Five Days National Level Online FDP on “**Research Trends and Technologies in Industry 4.0**” organized by KKR & KSR Institute of Technology and Sciences from 26.09.2022 to 30.09.2022



32. Ms.K.Radha, AP/CSE has successfully completed the NPTEL Course on “Theory of Computation” from July 2022 to September 2022.



33. Mr.V.Eswaramurthy, AP/CSE has successfully completed the NPTEL Course on “Theory of Computation” from July 2022 to September 2022.



34. **Ms.B.Suganya, AP/CSE** has participated and successfully completed a Five Days National Level FDP on “**Machine Learning and Deep Learning**” organized by SRM Institute of Science and Technology, Chennai from 11.10.2022 to 15.10.2022



35. **Mr.V.Eswaramurthy, AP/CSE** has participated and successfully completed a Five Days National Level FDP on “**Machine Learning and Deep Learning**” organized by SRM Institute of Science and Technology, Chennai from 11.10.2022 to 15.10.2022



36. **Ms.G.Gayathri, AP/CSE** has participated in the Three days Faculty Development Programme on “**Intelligent Computing for Next Generation Embedded IoT**” organized by the Department of Information Technology, Sri Krishna College of Engineering and Technology, Coimbatore from 26.10.2022 to 28.10.2022



37. **Ms.T.Gowrisankari, AP/CSE** has participated in the Three days Faculty Development Programme on “**Intelligent Computing for Next Generation Embedded IoT**” organized by the Department of Information Technology, Sri Krishna College of Engineering and Technology, Coimbatore from 26.10.2022 to 28.10.2022



38. **Ms.C.Devipriya,AP/CSE**, has participated in the Three days Faculty Development Programme on “**Intelligent Computing for Next Generation Embedded IoT**” organized by the Department of Information Technology, Sri Krishna College of Engineering and Technology, Coimbatore from 26.10.2022 to 28.10.2022



39. **Mr.K.Prabhu,AP/CSE**, has participated in the Three days Faculty Development Programme on “**Intelligent Computing for Next Generation Embedded IoT**” organized by the Department of Information Technology, Sri Krishna College of Engineering and Technology, Coimbatore from 26.10.2022 to 28.10.2022



40. **Ms.P.Banumathi,AP/CSE**, has participated in the Three days Faculty Development Programme on “**Intelligent Computing for Next Generation Embedded IoT**” organized by the Department of Information Technology, Sri Krishna College of Engineering and Technology, Coimbatore from 26.10.2022 to 28.10.2022



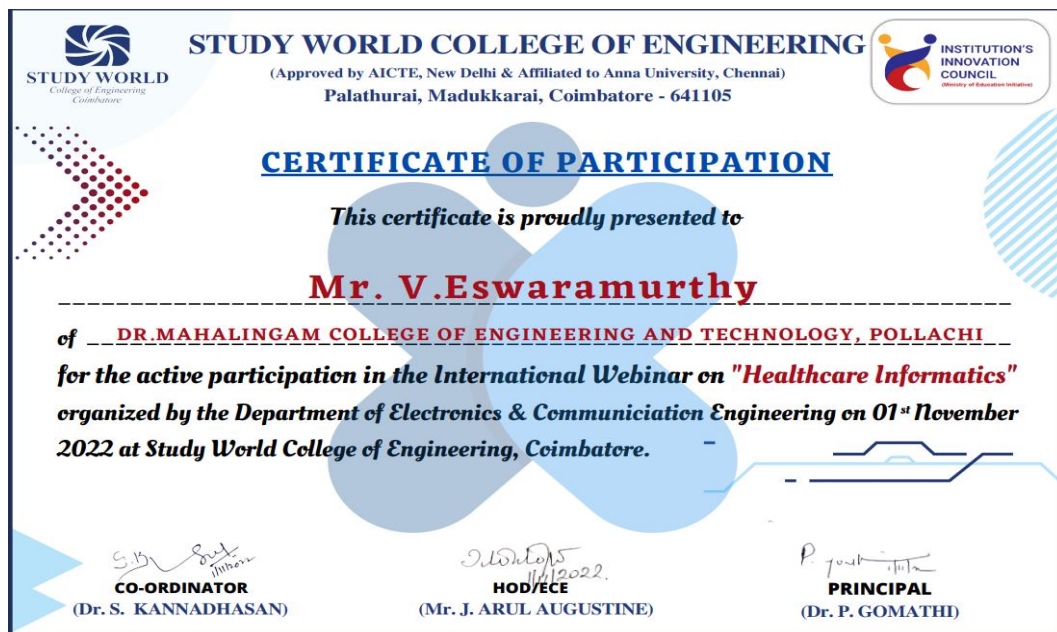
41. **Mr.S.Senthil Prabhu,AP/CSE**, has participated in the Three days Faculty Development Programme on “**Intelligent Computing for Next Generation Embedded IoT**” organized by the Department of Information Technology, Sri Krishna College of Engineering and Technology, Coimbatore from 26.10.2022 to 28.10.2022



42. **Mr.V.Eswaramurthy,AP/CSE**, has participated in the Three days Faculty Development Programme on “**Intelligent Computing for Next Generation Embedded IoT**” organized by the Department of Information Technology, Sri Krishna College of Engineering and Technology, Coimbatore from 26.10.2022 to 28.10.2022



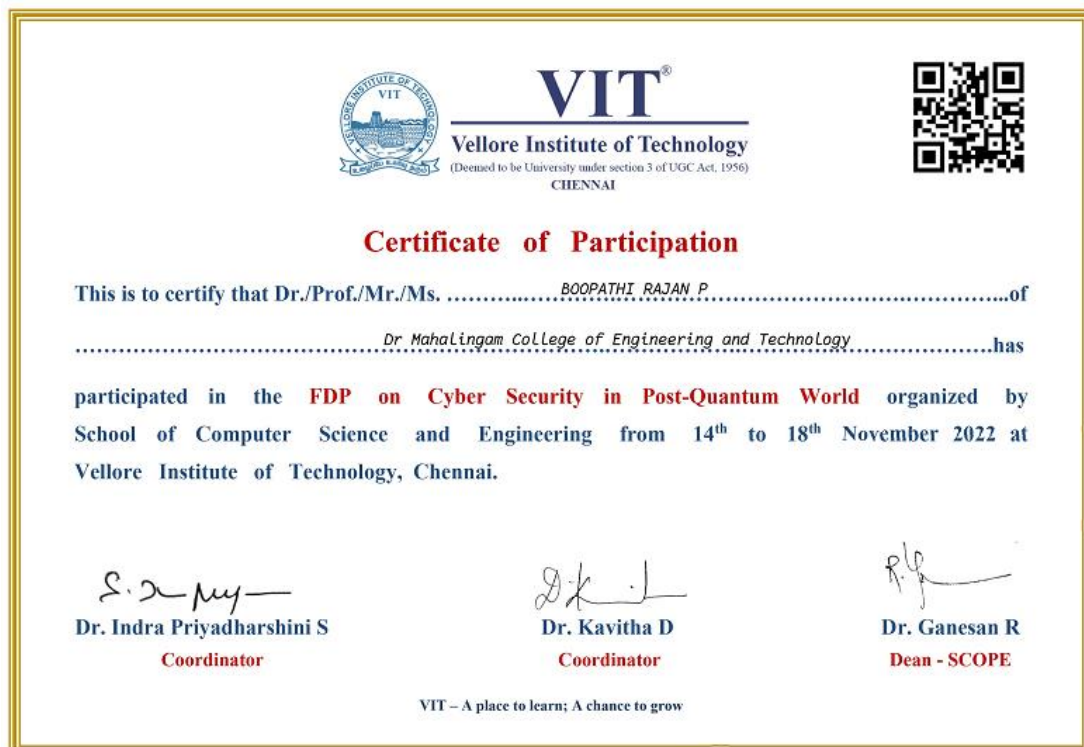
43. **Mr.V.Eswaramurthy, AP/CSE** has participated in the International Webinar on "**Healthcare Informatics**" organized by the Department of Electronics & Communication Engineering on 01.11.2022 at Study World College of Engineering, Coimbatore.



44. **Mr.V.Eswaramurthy, AP/CSE** has participated in One Day International Level seminar on “**Deep Learning Techniques on Medical Image Classification**” organized by M.Kumarasamy College of Engineering, Karur held on 11.11.2022



45. **Mr.P.Boopathirajan, AP(SS)/CSE**, has participated and successfully completed the Five Days FDP on “**Cyber Security in Post-Quantum World**” Organized by School of Computer Science and Engineering, from 14.11.2022 to 18.11.2022 at Vellore Institute of Technology, Chennai



46. **Ms.C.Devipriya**, AP/CSE, has participated and successfully completed the Five Days FDP on “Research Advancements in Intelligent Computing Technologies” Organized by Department of Computer Science and Engineering, from 19.12.2022 to 23.12.2022 at Sri Krishna College of Engineering and Technology, Coimbatore



ABOUT DEPARTMENT

The department of Computer Science and Engineering [CSE] was established in 1998. It instills confidence among the students to make themselves experts in the field of computers. It also enables them to occupy a place of prominence in IT industries globally. The students ought to do a project on or off-campus in the final year with an option to choose their platform and thus they are exposed to the real time computer problems which will mould them to conquer the challenging IT world. The department is affiliated to Anna University and accredited by National Board of Accreditation (NBA), AICTE, New Delhi & ISO Certified.

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