KPR Institute of Engineering and Technology

Department of Computer Science and Engineering
Accredited by NBA | Permanently Affiliated to Anna University – Chennai

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

NEWS LETTER

FUTURISTIX

Volume 1 – JULY 2022 – DEC 2022

KEVIN SAMUEL

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About the Department

The Department had a humble beginning with an intake of 60 students in Under Graduate program in Computer Science and Engineering (B.E.) in the year 2010. Post Graduate program in Computer Science and Engineering (M.E.) was introduced in the year 2014 with an intake of 18 students. Today the Department caters the needs of 720 students. The Department has been accredited by NBA and has also been recognized as a Research Centre by Anna University, Chennai.

In our department, we have 46 highly qualified, dedicated faculty members for the upliftment of the student fraternity. The curriculum and syllabi are revised once in 6 months with the feedback of alumni and industry experts to make the students meet the industry expectation for their career and development. The syllabus is embedded with GATE curriculum that strives the students to clear competitive exams like UPSC (IAS), GATE. The Department has state of the art infrastructure in terms of laboratories, classroom, seminar hall, etc. The Department is stepping forward to expand its wings from the national to international area through innovative teaching practices and industry/academic collaborations. Special labs such as Mobile App Development, Data Science, Machine Learning, Augmented reality and Virtual Reality, Networks and Intelligence Computing are initiated to help the students excel in industrial environment.

The Department has signed MoUs with Emurgo Amazon Web Services, REDHAT, EMURGO for establishing Center of Excellences through which the students are benefited with International certification courses like RHCSA, BLOCKCHAIN, ORACLE, AI& Machine learning from Xebia University, C-DAC CLOUD. To equip the students, the department offers with value added courses in Data Science and Big data analytics by Dell EMC2, Oracle, Block chain and Java. Apart from academics, the college provides platform to the students in order to showcase their unique talents through various non-technical clubs like Dance, humor, music, food photography, Art & Craft Internet radio club etc. Liberal arts courses like roof gardening, two-wheeler maintenance and other are also offered by various departments open to all the students.

Vision of the Department

To foster the students by providing learner centric teaching environment, continuous learning, research and development to become thriving professionals and entrepreneurs to excel in the field of computer science and contribute to the society.

Mission of the Department

1. Providing value-based education and contented learning experience to the students
2. Educating the students with the state of art technologies and cultivating their proficiency in analytical and designing skills
3. Enabling the students to achieve a successful career in Computer Science and Engineering or related fields to meet the changing needs of various stakeholders
4. Guiding the students in research by nurturing their interest in continuous learning towards serving the society and the country

Programme Educational Objectives (PEOs)

The Graduates of Computer Science and Engineering will:

PEO1: Obtain knowledge in cutting edge technologies in the field of computer science, necessary to solve real time problems through value-based education

PEO2: Possess skills for team building, leadership quality and ethical values necessary to function productively and professionally

PEO3: Develop innovative ideas to establish themselves as professionals and entrepreneurs in computing industry

PEO4: Continue to learn new technologies through higher studies and research

Programme Outcomes (POs)

Graduates of Computer Science and Engineering will have:

PO1 Engineering Knowledge: An ability to apply the knowledge of mathematics, science, engineering and computing appropriate to computer science and engineering

PO2 Problem Analysis: An ability to understand, analyze, formulate and solve engineering problems using principles of mathematics and computer science

PO3 Design/development of Solutions: An ability to design and construct software system, component or process to meet the desired needs within the realistic constraints

PO4 Conduct Investigations of Complex Problems: An ability to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, synthesis of information to provide valid conclusions

PO5 Modern Tool Usage: An ability to create, select and apply appropriate techniques, resources and modern IT tools to complex engineering activities with an understanding of the limitations

PO6 The Engineer and Society: An understanding of professional, ethical, legal, security and social responsibilities

PO7 Environment and Sustainability: An ability to understand the impact of engineering solutions in societal and environmental contexts for a sustainable development

PO8 Ethics: Ability to apply ethical principles and commit to professional ethics and responsibilities

PO9 Individual and Team Work: An ability to function effectively on multi-disciplinary teams to accomplish a common goal

PO10 Communication: An ability to communicate effectively with engineering community and society and be able to comprehend and write effective reports and documents, make effective presentations and give and receive clear instructions

PO11 Project Management and Finance: Demonstrate the understanding of engineering management principles and apply these to manage projects as a member and/or as a leader in a team

PO12 Life-long Learning: Recognize the need for lifelong learning in the context of technological change

Programme Specific Outcomes (PSOs)

Graduates of Computer Science and Engineering will have:

PSO1: An ability to identify and analyze data management system like data acquisition, big data so as to facilitate the students in solving problems using the techniques of data analytics

PSO2: An ability to apply design and development principles of hardware and software in emerging technology environments like cloud computing and cyber forensics

EVENTS ORGANIZED

Webinar on
"PROPER USE OF SOCIAL NETWORKS, FLAGGING AND REPORTING INAPPROPRIATE CONTENT"

The program has been organized by the Computer Science and Engineering Department in association with Cyber Awareness Diwas by the Ministry of Home Affairs and Office of Student Affairs. It is planned for Undergraduate students.Ms. Sujadharshini, II-CSE gave the welcome address. She delivered the agenda of the program and Mr.Karthik Prasath, II-AI&DS addressed Cyber Diwas. Dr.A.C.Sumathi, Head-CSE has given her felicitation address and encouraged the students to participate in the session interactively.

The resource person Mr.M.Raghul, Software Engineer, Hexaware Technologies Pvt ltd, Chennai addressed students starting with his introduction and his experience with the industry. He shared his expectations as a student and experience as an employee. The resource person well explained about proper usage of social networks and also addressed some issues faced by students and the public community due to the usage of inappropriate content. During the session, he gave detailed information about the tools used for Social Network hacking and security issues, etc. Students raised many queries and doubts about the preparedness for the industry. All the doubts are cleared by him. The session was so motivating and encouraged the students. He motivated students to start working on online platforms and live projects.

Webinar on
"ONLINE SHOPPING THREATS, LOTTERY EMAILS, LOAN FRAUDS"

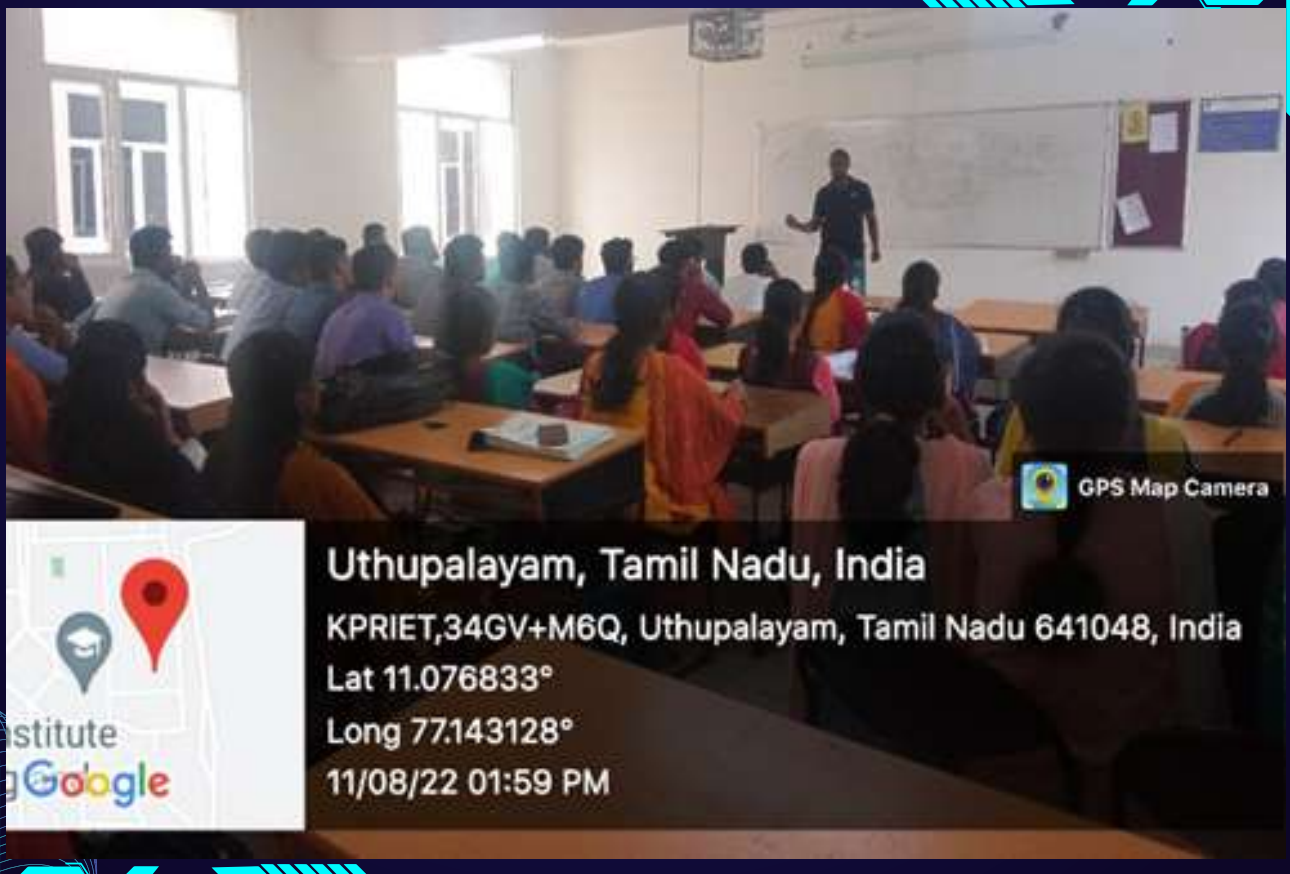
The program has been organized by the Computer Science and Engineering Department in association with Cyber Awareness Diwas by the Ministry of Home Affairs and Office of Student Affairs.It is planned for Undergraduate students.Mr. Sibi, III-CSE gave the welcome address. He delivered the agenda of the program and Mr. Karthik Prasath, II-AI&DS addressed Cyber Diwas.

Dr.J.Indra, Head (i/c)-CSE has given her felicitation address and encouraged the students to participate in the session interactively. The resource person Mr. A. MuniBhobesh, Security Engineer (Cybersecurity), Red Team Factory Pvt ltd, Bangalore addressed students starting with his introduction and his experience with the industry. He shared his expectations as a student and experience as an employee. The resource person well explained proper usage of internetwork, online shopping threats, social networks for loans, etc, and also addressed some issues faced by students and the public community due to usage of Free- wi-fi and etc. During the session, he gave detailed information about the tools used for Social Network hacking and security issues, etc. Students raised many queries and doubts about the preparedness for the industry. All the doubts are cleared by him. The session was so motivating and encouraged the students. He motivated students to start working on online platforms and live projects.

Seminar on
“GATE AWARENESS PROGRAM”

Department of Computer Science and Engineering and Career Advancement Cell jointly organized ‘GATE AWARENESS PROGRAM’. More than 120 students participated in this program.
Mr. Sathyamoorthy, and Mr.Vivekanandan, GATE Educator from Unacademy, given an insight about GATE exam.

They have explained well about how to approach the GATE exam, study tips, how to crack GATE exam easily and so on. They interacted with the students and faculty members. It was really a useful session for the students and the faculty members of the department.



Webinar on
"BROWSER DESKTOP SAFETY AND SECURITY IN ONLINE FINANCIAL TRANSACTIONS"

The program has been organized by the Computer Science and Engineering Department in association with Cyber Awareness Diwas by the Ministry of Home Affairs and Office of Student Affairs. It is planned for Undergraduate students.Mr. Surya, III-CSE gave welcome address. He delivered agenda of the program and Mr.Sibi form II-CSE addressed about Cyber Diwas. Dr.N.Yuvaraj, Head-CSE given her felicitation address and encouraged the students to participate the session interactively.

Mr. Surya, III-CSE gave welcome address. He delivered agenda of the program and Mr.Sibi form II-CSE addressed about Cyber Diwas. Dr.N.Yuvaraj, Head-CSE given her felicitation address and encouraged the students to participate the session interactively. The resource person Ms.Preethi, Manager-IT Information Risk Management, Endpoint Security and Forensics, Reliance Industries, Navi-Mumbai addressed students starting with her introduction and her experience with the Reliance industry. She shared her expectations as a student and experience as an employee. The resource person well explained about proper usage of Desktop Browser for financial online transactions for loan etc and also addressed some issues faced by students and public community due to usage of desktop browser and etc. During the session she addressed detailed information about the tools used for protecting desktop browser, its safety and security issues etc. Students raised many queries and doubts about the preparedness to the industry. All the doubts are cleared by resource person. The session was so motivated and encouraged the students. She motivated students to start working on online platforms and live projects for student digital profile building.

Guest Lecture on
"GREEN COMPUTING SCOPE AND OPPORTUNITIES IN SUSTAINABLE DEVELOPMENT FOR SOFTWARE ENGINEERS"

Students can able to use computers and other computing devices and equipment in energy-efficient and eco-friendly ways. There are many points were discussed in the event and the following are the significant points explained by the resource person,

1.Green computing technique reduces energy consumption which results into low carbon dioxide emission.

2.By using green computing techniques we can also save money that was spent in extra usage of energy and resources.

3.Green computing also applies changing government policy to encourage recycling.

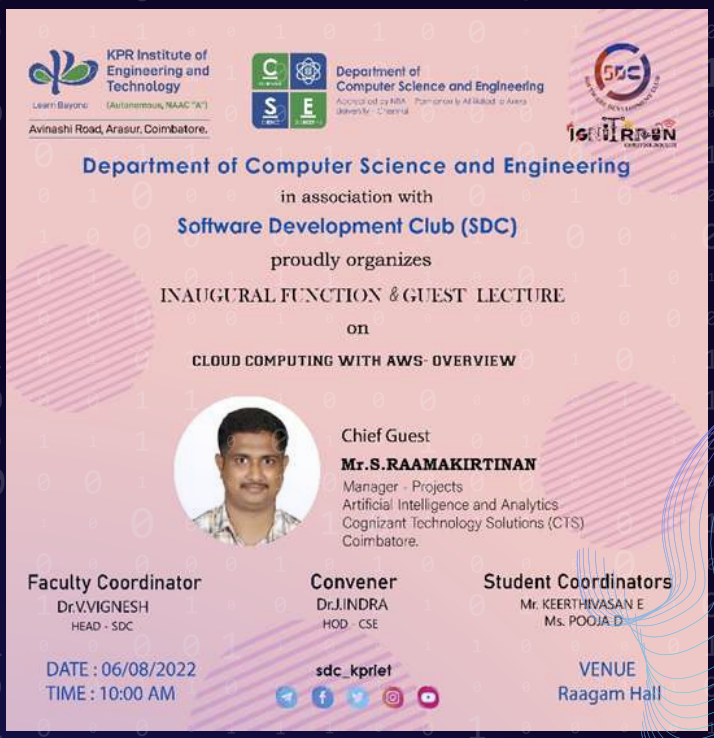
This was the successful and very interactive session because students were interacted more with resource person and clear their doubts from the topic delivered. Also students interacted more regarding placements preparation activities and recruitment process.

Association Activity

Crossword / Riddles Puzzles

Inauguration of CSE Association and Software Development Club
Guest Lecture on
"Cloud Computing with AWS-Overview"

The CSE Department Association and Software Development Club (SDC) was inaugurated on 06.08.2022 at 10:00 AM in RAGAM Hall. Dr.V.Vignesh, Associate Professor and SDC - Head, Department of Computer Science and Engineering inducted the office bearers for the academic year 2022-2023. The chief guest for the occasion, Mr. S.RAAMAKIRTINAN, Manager-Projects, Artificial Intelligence and Analytics, Cognizant Technology Solutions, Coimbatore was the guest for the day. He addressed the gathering on the topic "Cloud Computing with AWS-Overview".



He shared his wide experience with the insights of Cloud Computing with AWS in the working environment. He gave a valuable talk about the cloud environment with amazon web services. He also gives an insight into the research areas of the cloud and also gives more valuable suggestions on how web services utilize the cloud environment He urged the students to focus on at least two alternative technologies in each area (Frontend, Backend, Web, and Cloud Technologies) to widen their prospects of placement. Totally 620 students benefited from this guest lecture. A short video was presented in the session which was regarding the activities conducted by the cell in the academic year 2021-2022.

Inauguration of CSI Student Chapter & Guest Lecture on “Emerging Tech Trends

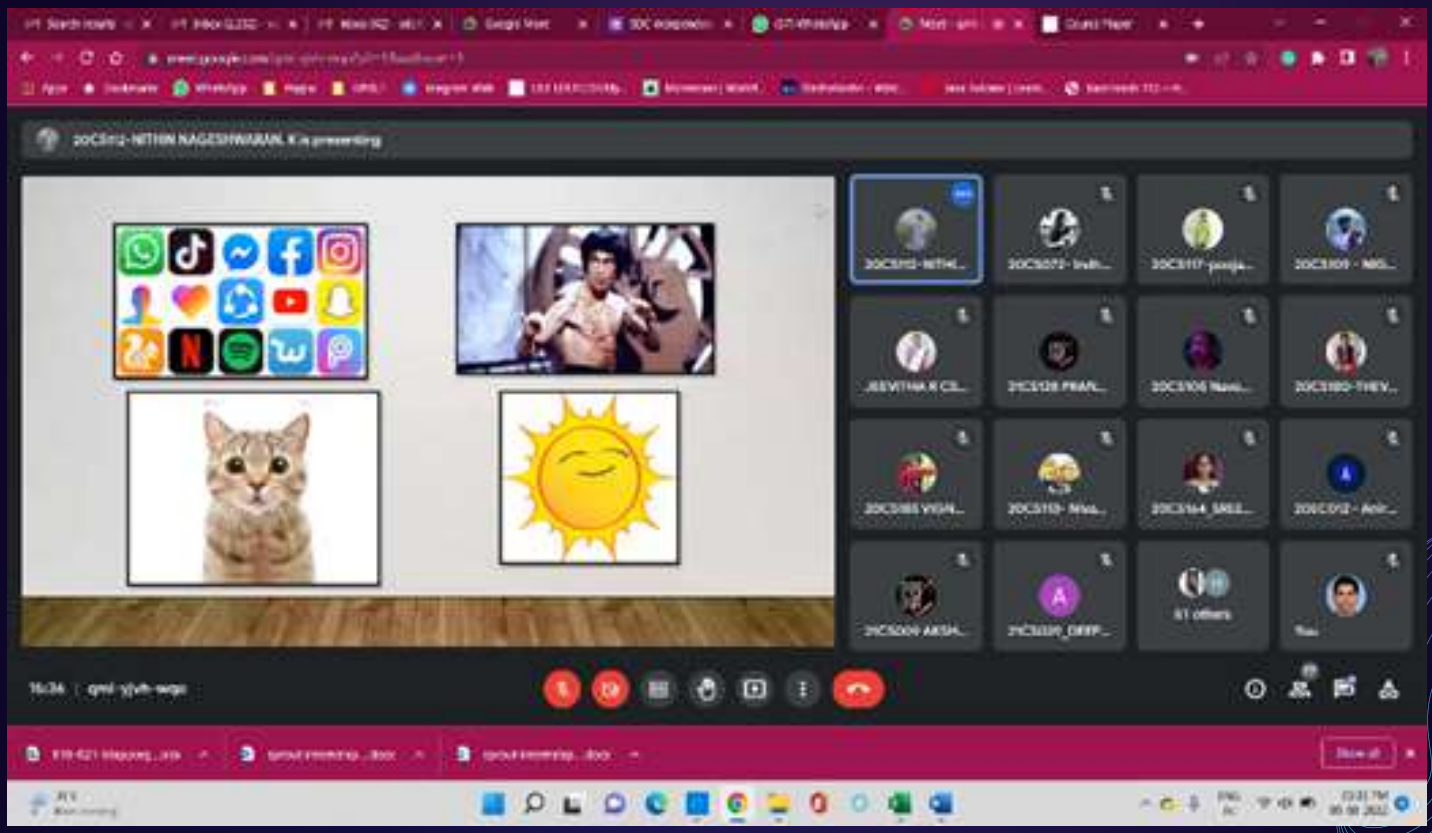
The CSI Student Chapter was inaugurated on 06.08.2022 at 2.30 PM in RAGAM Hall. Dr.V.Vignesh, Associate Professor and CSI Student Branch Councellor, Department of Computer Science and Engineering inducted the office bearers for the academic year 2022-2023. The chief guest for the occasion, MR.DURAIRAJ VISWANATHAN, Principal Consultant, THOUGHTWORKS, Coimbatore was the guest for the day. He addressed the gathering on the topic “Emerging Tech Trends”.

He shared his wide experience with the insights of emerging technologies in the field of computer science. He gave a valuable talk about how AI and AR and VR took place in the existing market. He also gives an insight into the research areas in the recent trends and also gives more valuable suggestions on how web services utilize the cloud environment. He urged the students to focus on at least two alternative technologies in each area (Frontend, Backend, Web, and Cloud Technologies) to widen their prospects of placement. Totally 620 students benefited from this guest lecture. A short video was presented in the session which was regarding the activities conducted by the CSI Chapter in the academic year 2021-2022.

Guest Lecture on “Insight on Blockchain in Industry”

The CSE Department Association, Software Development Club (SDC) in association with CSI Student Chapter conducted an Independence Day contest from 09.08.2022 to 16.08.2022. Dr.V.Vignesh, Associate Professor and SDC - Head, Department of Computer Science and Engineering lead this program. The various contest is scheduled from 09.08.2022 to 16.8.2022. On 09.08.2022, the Independence Day contest was inaugurated by the head of the department Dr.J.Indra and the first event tech bits was conducted. 72 participants participated in the program. It is an online event.

Independence Day Contest



Students Achievement

CSE is incredibly proud to highlight the accomplishments produced by our star at the 20th National Karate Championship in 2022 and the South Indian Open Karate Championship. Our student Mr. G. Bharath from CSE took home bronze medals in the karate event at the 20th National Karate Championship in 2022, which was held at the School of Goju Ryu Karate Do, Udumalpet.

In the modern world people are habituated in apartments and work in a cabin for half of the day. They don't get exposed to any fresh air because they don't have any space to grow any kind of plants or trees. Even in these constraints some peoples support the container-based plantation. Container based plantation is the good way to make your workplace, workbench and apartment windows look and feel good.

so our product promotes the container-based plantation into next level by adding features like remote monitoring and irrigation system. It also supports voice control and data graph on plant health. Soon, OLED will be added as the next feature to the project.

KAVYA SRI B, KISHORE RAM B of II CSE B has participated and won 1st prize in "TECHNICAL QUIZ" event of TECHOZRIC'2K22- National Level Symposium organized by the Department of IT at KGISL Institute of Technology on 27th September 2022.

KEVIN SAMUEL C of II CSE B has participated and won 1st prize in "PHOTOGRAPHY" event of TECHOZRIC'2K22- National Level Symposium organized by the Department of IT at on 27th September 2022.

KGiSL INSTITUTE OF TECHNOLOGY

Department of Information Technology

TECH OZRIC

CERTIFICATE

OF APPRECIATION

THE CERTIFICATE IS PRESENTED TO:

KEVIN SAMUEL.C

has participated and won the 1st prize in PHOTOGRAPHY event of TECHOZRIC'2K22-National Level Symposium organized by the Department of Information Technology at KGiSL Institute of Technology on 27th September 2022.

Dr. Sankar Ram N, Convener

Dr. Selvam M, Principal

Dr.N.Rajkumar, Secretary

Mr.Jeyan from III CSE B scored an Outstanding performance and securing 62nd RANK in INNOVATE INDIA CODING CHAMPIONSHIP FINALE, organized by CHANDIGARH UNIVERSITY with CODING NINJAS on 12.08.2022

Mr.Nigun Sanjai from III CSE B had participated in the Youth Talk organized by ICT Academy on 27 Oct 22. He passed with 2 rounds of selection and among 2500+ participants , he got himself placed under Top 15 and presented himself in the Grand Finale held at Sri Krishna College of Engineering and Technology, Coimbatore.

Four Students from III CSE-B (Madhan,Nagulan,Nigun Sanjai,Pravin Kanth) had participated in the Paper Presentation contest organised by Sri Ramakrishna Engineering College on 23rd September 2022. They presented an alluring paper titled The AGRIBOT. They topped first place among 100+ participants and won a Cash voucher of Rs.1000.

Three students from II CSE B(PRANESH J, SHRIMATHI GM, PAVITHRA V) had participated in the paper presentation contest organised by Sri Ramakrishna Engineering College on 19th October 2022 and got 2nd place with 1000 rupees cash prize.They presented about their project Campus Navigation.

Aiswarya B from II CSE had participated and secured first prize in the dance competition (group) during EKNA'22-National level techno cultural fest at Anna University regional campus, Coimbatore on November 4th, 2022.

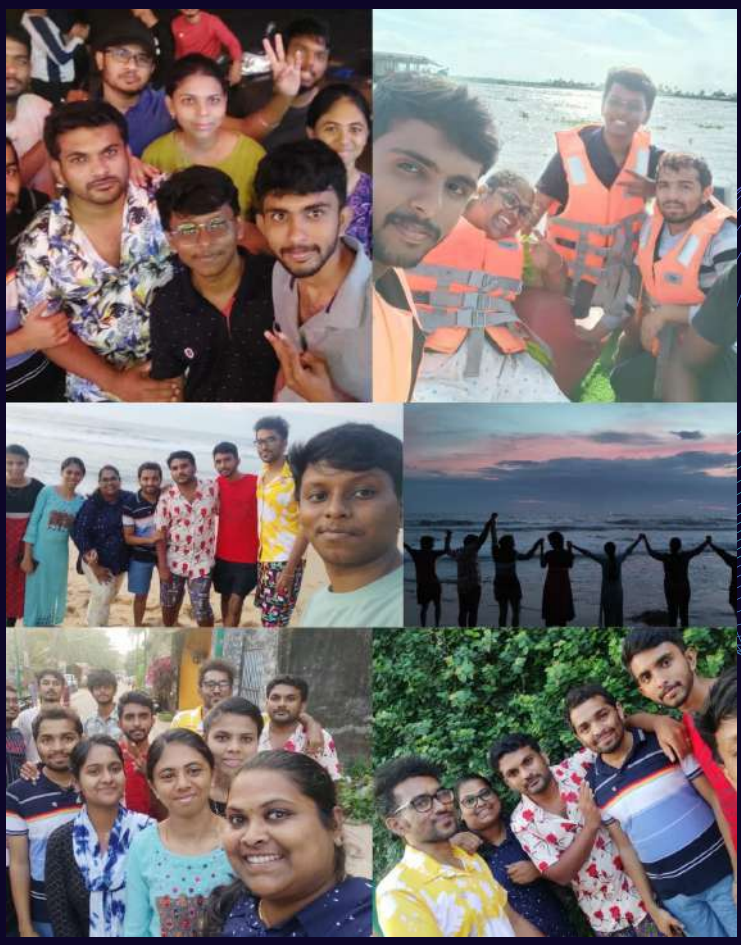
BHARATH G of 2nd CSE A has particiapted in the 20th National karate Championship on 7th August 2022 and has secured 2nd prize in the individual kumite in black belt category.

Rajadharani R from II CSE B had participated in the Technical Connection organized by KPR Institute of Engineering and Technology , got 1 st plaze with 200 rupees cash prize.

Praneesh Raja BM and sri sairam has participated in technical connection in chemical symphosisum at KPRIET and won 2nd prize 100 rupees.

Harish R from II CSE B scored the highest marks in the futureskills, NASSCOM Certification 'Acquiring Data'.

Happy Moments



Memorandum of Understanding

MoU signing between KPRIET and KG IT Services

MoU between KPRIET and KG IT Services, Bengaluru is signed on 12/07/2022

Department of Computer Science and Engineering is signed MoU with KG IT Services, Bengaluru on 12th July 2022 with a primary objective of executing consultancy projects and developing products in the domain of Data Science and Machine Learning.

Mentor Mentee photoshoot

Research and Development
Faculty Publications

1. K. Sita Kumari, S.L. Abdul Haleem, G. Shivaprakash, M. Saravanan, B. Arunsundar, Thandava Krishna Sai Pandraju, Agriculture monitoring system based on internet of things by deep learning feature fusion with classification, Computers and Electrical Engineering, Volume 102, 2022, 108197, ISSN 0045-7906.

2. K. Sellamuthu and V. K. Kaliappan, "Q-learning-based pesticide contamination prediction in vegetables and fruits," Computer Systems Science and Engineering, vol. 45, no.1, pp. 715–736, 2023.

3. Vijayaganth V, Krishnamoorthi M, Soft computing-based ensemble learning model for multi-disease classification of plant leaves, JOURNAL OF EXPERIMENTAL & THEORETICAL ARTIFICIAL INTELLIGENCE,Vol.34, Issue No. 4, August 2022.

4. Sathya D., Primya T., Vinothini S., Priya J., Jagadeesan D, Smart health system using stacking ensemble classification algorithm. International Journal on Information Technologies and Security, No. 3 (vol. 14), 2022, pp. 67-78.

5. N.Krishnamoorthy, Dr.S.Suresh, D.Mohanapriyam, Dr.Arpana Prasad, Dr.R.Krishnamoorthy, Dr.R.Thiagarajan, Utilisation of Deep Learning to Exploit Locust Outbreaks in Agricultural Harvesting, NeuroQuantology,Vol.20, Issue No.10, page No. 5035-5042, 2022, ISSN No :1303-5150.

6. Balakrishnan, K., Dhanalakshmi, R., Akila, M. et al. Improved equilibrium optimization based on Levy flight approach for feature selection. Evolving Systems (2022).

7. Sekaran, R. & Akila, M. & Yuvaraj, N.. (2022). Transmitter Half Distribution Angle Optimization in Non-Line of Sight Visible Light Communication. Journal of Nano electronics and Optoelectronics.

8. S. Srithar, G. Ramesh Kalyan, S. Karthic, M. Naveenkumar, P. Arulprakash and E. Vetrimani, "Cost-Effective Distributed Booster Load Balancer in Amazon Cloud Environment," 2022 7th International Conference on Communication and ElectronicsSystems(ICCES),2022,pp.613-619

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K. Kamaraj, B. Lanitha, S. Karthic, P. N. Senthil Prakash, R. Mahaveerakannan: A Hybridized Artificial Neural Network for Automated Software Test Oracle. Comput. Syst. Sci. Eng. 45(2): 1837-1850 (2023)

Sundar, S.P., Vijayabalan, P., Kaliappan, V.K. et al. Emission reduction and performance enhancement of diesel engine fuelled using palm oil biodiesel and nanoparticle as additive. Environ Dev Sustain (2022).

Karthic, S., Kumar, S.M. Hybrid Optimized Deep Neural Network with Enhanced Conditional Random Field Based Intrusion Detection on Wireless Sensor Network. Neural Process Lett (2022).

Karthic, S., Manoj Kumar, S. & Senthil Prakash, P.N. Grey wolf based feature reduction for intrusion detection in WSN using LSTM. Int. j. inf. tecnol. 14, 3719–3724 (2022).

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A. Balamurugan, S. Janakiraman, M. D. Priya and A. C. J. Malar, "Hybrid Marine predators optimization and improved particle swarm optimization-based optimal cluster routing in wireless sensor networks (WSNs)," in China Communications, vol. 19, no. 6, pp. 219-247, June 2022.

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