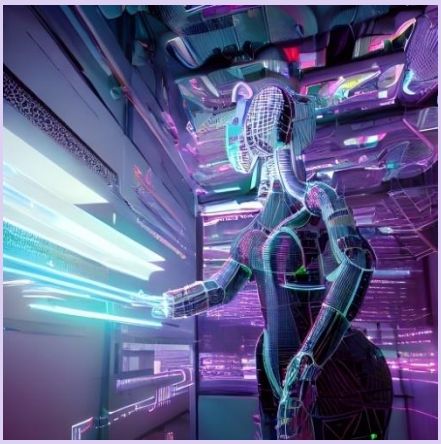
Sri SAI RAM ENGINEERING COLLEGE
West Tambaram, Chennai - 44



ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

NEWSLETTER

May 2024, Volume 3, Issue 5

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Vision/Mission of College

Vision

To emerge as a “Centre for excellence” offering Technical Education and Research Opportunities of very high standards to students, develop the total personality of the individual, and in still high levels of discipline and strive to set global standards, making our students technologically superior and ethically strong, who in turn shall contribute to the advancement of society and human kind.

Mission

We dedicate and commit ourselves to achieve, sustain and foster unmatched excellence in Technical Education. To this end, we will pursue continuous development of infrastructure and enhance state-of-the art equipment to provide our students a technologically up-to date and intellectually inspiring environment of learning, research, creativity, innovation and professional activity and inculcate in them ethical and moral values.

Quality Policy

We at Sri Sairam Engineering College are committed to build a better nation through Quality Education with team spirit. Out students are enabled to excel in all values of Life and become Good Citizens. We continually improve the System, Infrastructure and Services to satisfy the Students, Parents, Industry and Society.

Vision/Mission of Department

Vision

To emerge as a “Centre of Excellence in the field of Artificial Intelligence and Data Science”, The Department is committed to inculcate discipline, offering best Technical Education and Research Opportunities and ethically strong to meet the global challenges, who in turn shall contribute to the advancement and welfare of the society.

Mission

- To produce students with a sound understanding of the fundamentals of the theory and practice of Artificial Intelligence, Machine learning and Data Science.
- To enable students to become leaders in the Industry and Academia Nationally as well as internationally.
- To meet the pressing demands of the nation in the areas of Artificial Intelligence and Data Science.

Epitome of Our Mission

The Department of Artificial Intelligence and Data Science emerged in the year 2020 in Sairam Institutions with the intake of exiguous students. It has now evolved quintessentially with an admirable admission of about 60 aspiring students in 2020, 120 in 2021, 180 in 2022 and gradually increasing each year, join in the hands with a dedicated team of erudite faculty.

Pradeep Secures 1st Place in National Level Hack Bell - Cybercractz 2.0 Hackathon

Pradeep, a second-year student, achieved a significant milestone by securing 1st place in the "National Level Hack Bell - Cybercractz 2.0" hackathon, a prestigious 30-hour event organized by KCG College on the 2nd and 3rd of May 2024. This national-level competition drew talented participants from various institutions, all vying to showcase their coding prowess and innovative thinking. Pradeep's project, which addressed a critical cybersecurity issue with a novel and technically excellent solution, distinguished itself from the rest. His ability to solve complex problems efficiently and present his ideas effectively to the judges underscored his exceptional skills and dedication.

Pradeep's success in this hackathon not only reflects his potential and positions him as a standout talent among his peers but also enhances his academic and professional profile. This achievement is a proud moment for him and his institution, highlighting the importance of innovation, dedication, and technical excellence. It serves as an inspiration to other students, encouraging them to participate in similar events and strive for excellence in their respective fields. With this remarkable accomplishment, Pradeep is poised for a bright future, laying a strong foundation for his continued growth and contributions to the tech industry.

Report on the ISTE Sponsored Online FDP on Robotic Process Automation

The Department of Mechanical and Automation Engineering successfully organized a 6-day online Faculty Development Program (FDP) on Robotic Process Automation, sponsored by the Indian Society for Technical Education (ISTE), from the 6th to the 11th of May, 2024. This program aimed to enhance the knowledge and skills of faculty members in the emerging field of robotic process automation, focusing on its applications, tools, and integration with other technologies.

On the third day of the FDP, during the second session, Dr. Swagata Sarkar, the Head of the Department of Artificial Intelligence and Data Science, delivered an insightful session titled "AI in Robotics." Dr. Swagata Sarkar's session highlighted the critical role of artificial intelligence in enhancing the capabilities of robotic systems. The presentation covered various AI techniques used in robotics, including machine learning, computer vision, and natural language processing, and discussed their practical applications in real-world robotic systems. The session was well-received by the participants, who engaged actively with Dr. Swagata Sarkar, appreciating the depth of knowledge and practical insights shared. This session underscored the interdisciplinary nature of modern engineering and the importance of integrating AI into robotic process automation to achieve advanced automation solutions.

Report on Webinar on Marine Data Analytics

The Department of Artificial Intelligence and Data Science, in collaboration with the IEEE Marine Technology Society and the IEEE Computational Intelligence Society, organized a highly informative webinar on Marine Data Analytics. The event took place on the 10th of May, 2024, via Google Meet. This webinar aimed to provide participants with insights into the application of data analytics in the marine sector, highlighting its importance and potential impact. The webinar featured two esteemed resource persons: Mr. Somasundaraman R, Chair of IEEE CIS, and Ms. Dharshini S, Technical Lead at IEEE CIS. Both speakers brought a wealth of knowledge and experience to the session, enriching the attendees' understanding of marine data analytics.

Mr. Somasundaraman R began the session by introducing the fundamentals of marine data analytics, emphasizing the significance of data-driven decision-making in marine technology. He discussed various techniques and tools used in the analysis of marine data, providing practical examples of how these methods are applied in real-world scenarios. His presentation underscored the critical role of computational intelligence in processing and interpreting vast amounts of marine data to enhance maritime

operations and research. Following Mr. Somasundaraman, Ms. Dharshini S delved deeper into specific applications of data analytics in the marine industry. She highlighted recent advancements and case studies where data analytics played a pivotal role in solving complex marine problems. Ms. Dharshini also discussed the challenges faced in marine data analytics, such as data quality and integration, and proposed strategies to overcome these issues. Her session was highly interactive, with participants engaging in discussions and seeking advice on their specific queries.

The webinar was a resounding success, with active participation from students, faculty members, and professionals from various disciplines. The insights shared by Mr. Somasundaraman and Ms. Dharshini provided valuable knowledge and sparked interest in further exploring the intersection of data science and marine technology. This event underscored the importance of interdisciplinary collaboration and the transformative potential of data analytics in advancing marine technology.

Report on Virtual Faculty Development Program on "Quantum Computing"

The Department of Artificial Intelligence and Data Science, in collaboration with the IEEE Computational Society, IEEE CTSoc, Institution's Innovation Council (Ministry of Education Initiative), and ISTE, successfully organized a 6-day virtual Faculty Development Program (FDP) on "Quantum Computing" from May 27th to June 1st, 2024. This comprehensive program aimed to equip faculty members with cutting-edge knowledge and skills in quantum computing, an emerging field with significant potential to revolutionize various sectors.

The FDP featured a distinguished lineup of speakers who are experts in their respective fields:

Dr. K. Porkumaran, Principal, Sri Sairam Engineering College, inaugurated the program, providing an overview of the importance of quantum computing and setting the stage for the intensive sessions that followed.

Mr. J Blesso Abraham, IBM Qiskit Advocate, explained the "Introduction to Quantum Computing." His session included hands-on exercises, enabling attendees to gain practical experience in quantum programming. Mr. U Jayachandiran, Assistant Professor, Dept of AI-DS, Sri Sairam Engineering College, focused on "Quantum Algorithms and Computing." He explained complex concepts with clarity, making them accessible to participants from various backgrounds. Mr. Karthiganesh Durai, Founder & CEO, Kwantum G Research Lab Pvt. Ltd, provided insights into "Quantum Machine Learning" and shared his experiences, highlighting the real-world impact and potential of quantum technologies.

Dr. R Deepalakshmi, HOD CSE, CARE College of Engineering, explained "Quantum Error Correction," providing a deep dive into the mechanisms that protect quantum information. Ms. Kalpana B N, Assistant Professor, St. Joseph's Institute of Technology, discussed "Post-Quantum Cryptography," emphasizing the need for new cryptographic methods in the era of quantum computing. Mr. Sundar Kanagaraj, Assistant Professor, IT, SRM Easwari Engineering College, covered "Quantum Key Distribution," a crucial aspect of secure quantum communications. Mr. V. Karthick, Associate Professor, Dept of CSE, Rajalakshmi Engineering College, explored the "Intersection of Quantum Computing in Academia and Industrial Research," highlighting collaborative opportunities.

Dr. Ramanathan G, Professor, Dept of Physics, Sri Sairam Engineering College, delved into "Quantum Computing in Quantum Gates," discussing the fundamental building blocks of quantum circuits.

Dr. Swagata Sarkar, Professor & HOD, AI-DS, Sri Sairam Engineering College, provided an "Overview of Quantum Hardware," explaining the physical

components and technologies underpinning quantum computers. Dr. K. Velmurugan, Professor & Head, Dept of CSE, Anjalai Ammal Mahalingam Engineering College, discussed "Quantum Network," shedding light on the networked aspects of quantum computing and communication.

The FDP was attended by faculty members from various institutions, who actively participated in discussions and practical sessions. The program received positive feedback for its comprehensive coverage of both theoretical and practical aspects of quantum computing. This FDP not only enhanced the knowledge and skills of the participants but also fostered collaboration and networking among professionals interested in quantum computing. The success of this program underscores the commitment of the Department of Artificial Intelligence and Data Science and its collaborators to advancing education and research in cutting-edge technologies. The insights and skills gained from this FDP will undoubtedly contribute to the academic and professional growth of the participants, preparing them to lead in the field of quantum computing.

Sairam Engineering College AI-DS Department Shines at Ideathon 4.0

The first-year students of Sairam Engineering College's Artificial Intelligence and Data Science (AI-DS) department have made a remarkable achievement by winning the top prize at the renowned Ideathon 4.0. This victory not only showcases the innovative spirit of the students but also highlights the quality of education and mentorship provided by the college.The competition was fierce, with numerous teams from various colleges presenting their cutting-edge ideas and solutions. The Sairam team impressed the judges with their innovative project, which demonstrated a deep understanding of AI and data science principles. Their solution addressed a critical real-world problem, showcasing both technical expertise and creative problem-solving skills.

The students' victory at Ideathon 4.0 has brought them significant recognition. Industry leaders and academic professionals praised their project for its originality and practical applicability. This accomplishment has put the AI-DS department of Sairam Engineering College in the spotlight, attracting attention from top tech companies and academic institutions. The success of the students is a testament to the

robust support system at Sairam Engineering College. The faculty members of the AI-DS department provided invaluable guidance and mentorship, helping the students refine their ideas and develop a compelling presentation. The college's emphasis on fostering an environment of innovation and critical thinking played a crucial role in this achievement.

With this victory, the future looks bright for the first-year AI-DS students of Sairam Engineering College. They have set a high standard for their peers and have laid a strong foundation for future successes. This win at Ideathon 4.0 is just the beginning of their journey in the field of artificial intelligence and data science. The college has planned a celebration event to honor the victorious students and their mentors. This event will not only celebrate their success but also inspire other students to pursue excellence and innovation. Looking ahead, the AI-DS department is planning to participate in more such competitions, fostering a culture of continuous learning and achievement. The triumph of the AI-DS department's first-year students at Ideathon 4.0 is a proud moment for Sairam Engineering College. It underscores the college's commitment to nurturing young talent and preparing them to excel in the ever-evolving field of technology. Congratulations to the students and the faculty for this outstanding achievement.

Sairam Engineering College Collaborates on IEEE EPICS Project with UBA and AI-DS Department

Sairam Engineering College has embarked on an exciting new project in collaboration with the IEEE Engineering Projects in Community Service (EPICS) program, Unnat Bharat Abhiyan (UBA), and its Artificial Intelligence and Data Science (AI-DS) department. This partnership aims to leverage advanced technology to address community challenges, promoting sustainable development and social impact. The collaboration with IEEE EPICS and UBA focuses on implementing a project that integrates AI and data science solutions to solve pressing issues faced by local communities. This initiative aligns with UBA's mission to involve higher education institutions in addressing the development challenges of rural India through appropriate technologies.

The AI-DS department at Sairam Engineering College is at the forefront of this project, providing technical expertise and innovative solutions. The faculty and students are working collaboratively to design and implement AI models and data analysis techniques that address the identified community needs. This hands-on experience is invaluable for the students, enhancing their learning and practical skills while contributing to societal

welfare. The project is supported by IEEE EPICS, which provides a platform for students to work on engineering projects that have a positive community impact. UBA's involvement ensures that the project aligns with national development goals and reaches the communities that need it the most. The combined support from these organizations, along with the college's dedicated faculty, ensures the project's success and sustainability. This project is set to make a significant impact on the targeted rural communities by providing them with advanced technological solutions to their challenges. It also paves the way for future collaborations and projects, fostering a culture of innovation and community service within Sairam Engineering College.

To recognize the efforts and achievements of the students and faculty involved in this project, Sairam Engineering College is planning a celebration event. This event will not only highlight the project's success but also inspire other students to engage in similar initiatives that combine technology with community service. The collaboration between Sairam Engineering College, IEEE EPICS, UBA, and the AI-DS department marks a significant step towards integrating technology and community service. This project exemplifies how educational institutions can play a pivotal role in societal development by leveraging their resources and expertise. Congratulations to everyone involved for their dedication and hard work in making this project a reality.

HCL SME Campus Visit - Raspberry pi hands on training & Interaction with Embedded product development professionals

On May 14, 2024, students from the Artificial Intelligence and Data Science (AI-DS) department at Sairam Engineering College had the unique opportunity to participate in an enriching hands-on training session and interactive workshop hosted by HCL's Subject Matter Experts (SME). This event focused on the practical applications of Raspberry Pi and provided an invaluable chance to interact with professionals in embedded product development.

The visit included an intensive Raspberry Pi hands-on training session, where students engaged with the hardware and software aspects of this versatile microcomputer. The training covered a range of applications, from basic programming and sensor integration to advanced IoT solutions, giving students a comprehensive understanding of Raspberry Pi's potential in various AI and data science projects. In addition to the technical training, the AI-DS students had the privilege of interacting with seasoned professionals in the field of embedded product development. These interactions provided insights into real-world applications and industry expectations, bridging the gap between academic knowledge and practical implementation. The experts shared their experiences and discussed the

latest trends and challenges in the industry, offering valuable advice and mentorship to the aspiring engineers.

This visit was not only a learning experience but also an inspiration for the students, showcasing the possibilities that lie ahead in their careers. The AI-DS department at Sairam Engineering College continues to prioritize such industry interactions, recognizing their importance in shaping well-rounded, industry-ready graduates. The HCL SME campus visit is part of the department's ongoing efforts to provide students with exposure to cutting-edge technologies and industry practices. By integrating hands-on training and professional interactions into the curriculum, the AI-DS department ensures that its students are well-equipped to meet the demands of the rapidly evolving tech landscape.

Looking ahead, the AI-DS department plans to organize more such events, fostering a continuous learning environment and keeping students updated with the latest technological advancements. These initiatives are crucial in preparing students for their future roles as innovators and leaders in the field of artificial intelligence and data science. The collaboration between Sairam Engineering College and HCL is a testament to the college's commitment to providing its students with the best possible education and industry exposure. Congratulations to the AI-DS students for making the most of this opportunity and to the faculty for facilitating such impactful experiences.

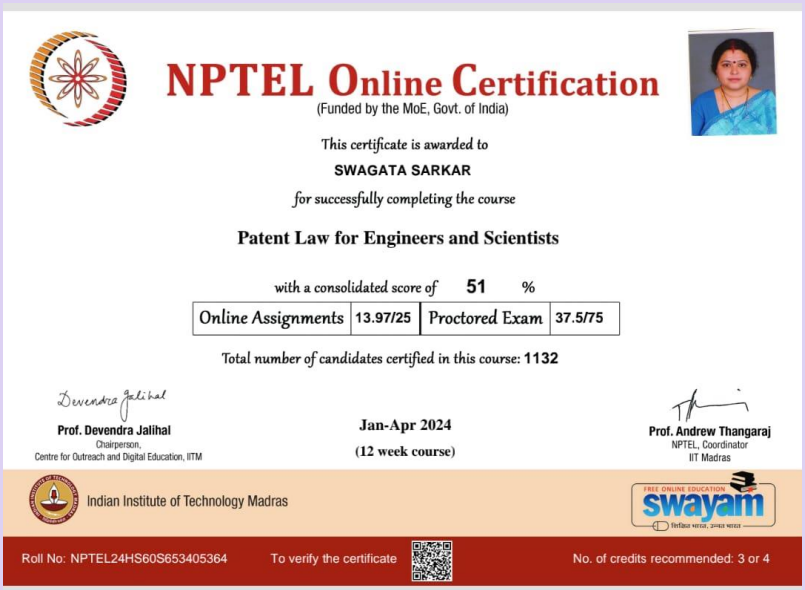
Congratulations to NPTEL Stars from Sairam Engineering College's AI&DS Department

Sairam Engineering College is proud to announce the stellar achievements of its students in the NPTEL courses. These motivated learners have not only excelled in their respective courses but have also demonstrated discipline and dedication, earning recognition as NPTEL Discipline Stars and NPTEL Believers. Among the NPTEL Motivated Learners are Keerthika Sathish, Karanam Poornasree, and Anushree, all from the AI&DS department. Their commitment to learning and their exceptional performance in NPTEL courses have earned them well-deserved accolades.

Additionally, Sanjay Venkat and Keerthana Sathish, also from the AI&DS department, have been recognized as NPTEL Believers for their unwavering dedication and belief in the NPTEL platform. These students exemplify the values of NPTEL - motivation, discipline, and belief - and serve as inspiring examples for their peers. Their achievements reflect not only their individual efforts but also the quality of education and support provided by Sairam Engineering College.

Congratulations to Keerthika Sathish, Karanam Poornasree, Anushree, Sanjay Venkat, Keerthana Sathish, and all the NPTEL Stars from Sairam Engineering College for their remarkable accomplishments.

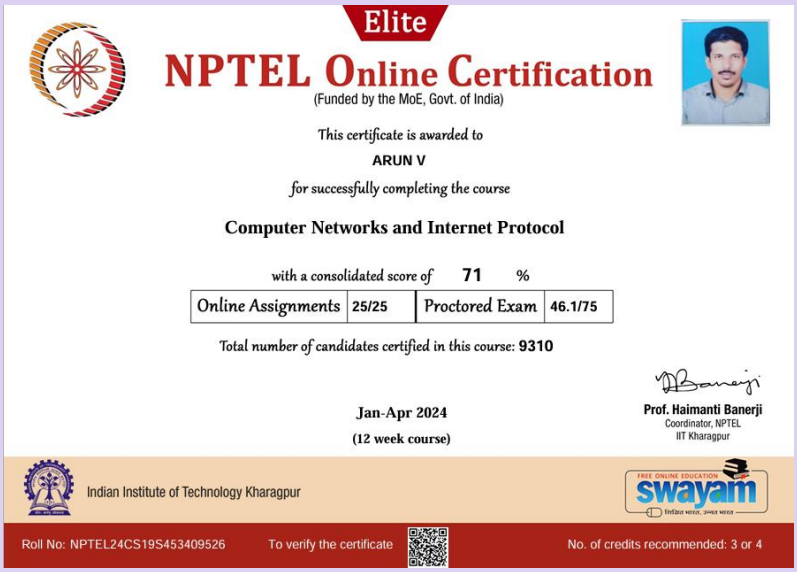
AI-DS Department Secures NPTEL Certifications in Patent Law and Cloud Computing


NPTEL Online Certification
(Funded by the MoE, Govt. of India)
This certificate is awarded to
SWAGATA SARKAR
for successfully completing the course
Patent Law for Engineers and Scientists
with a consolidated score of 51 %
Online Assignments 13.97/25 | Proctored Exam 37.5/75
Total number of candidates certified in this course: 1132
Prof. Devendra Jalihal
Chairperson,
Centre for Outreach and Digital Education, IITM
Jan-Apr 2024
(12 week course)
Prof. Andrew Thangaraj
NPTEL, Coordinator
IIT Madras
Indian Institute of Technology Madras
swayam
Roll No: NPTEL24HS60S653405364
To verify the certificate
No. of credits recommended: 3 or 4

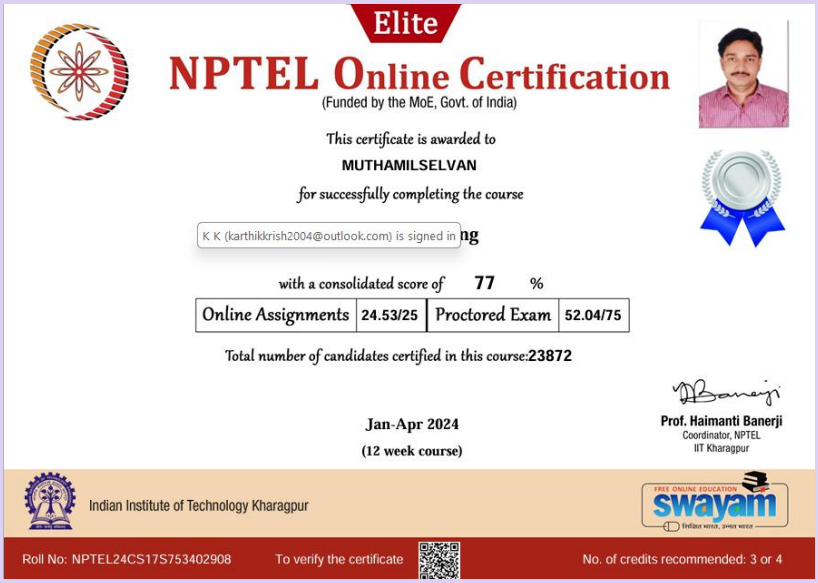
Dr. Swagata Sarkar, Head of the Artificial Intelligence and Data Science (AI-DS) department at Sairam Engineering College, has added another feather to her cap by successfully completing the NPTEL certification course on Patent Law for Engineers and Scientists. This accomplishment underscores her commitment to continuous learning and staying abreast of developments in the field of intellectual property rights.

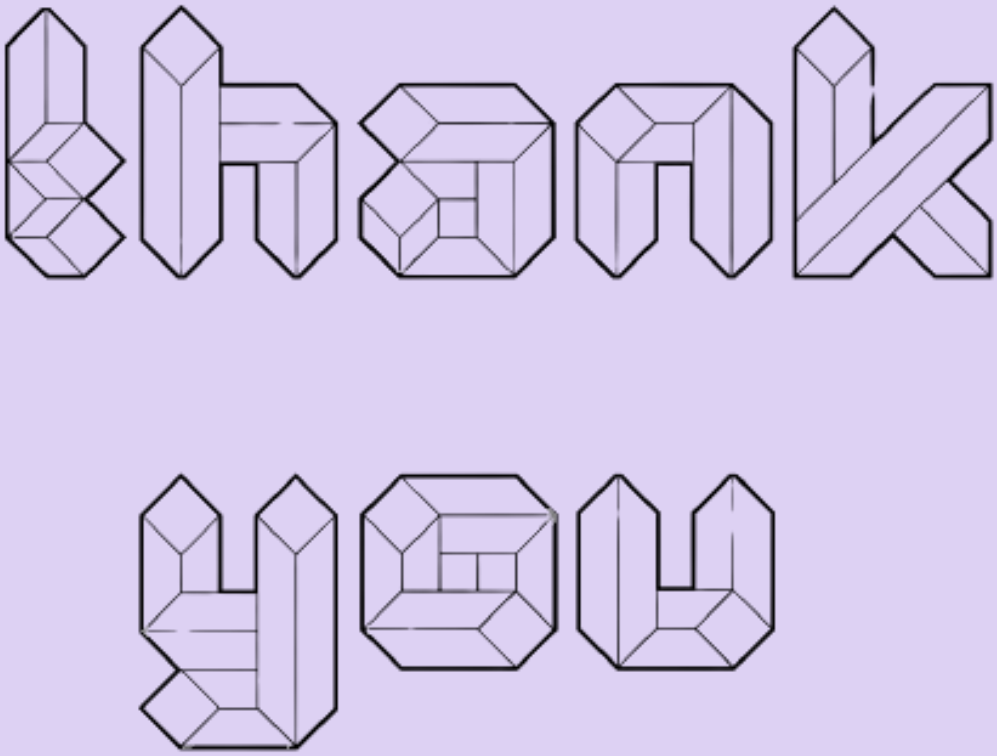
In addition to Dr. Swagata Sarkar's achievement, two Assistant Professors from the AI-DS department, Mr. Muthathamil Selvan and Mr. Arun V, have also obtained NPTEL certifications in Cloud Computing. Their expertise in this cutting-edge technology area will undoubtedly enrich the curriculum and benefit students pursuing


Elite
NPTEL Online Certification
(Funded by the MoE, Govt. of India)
This certificate is awarded to
ARUN V
for successfully completing the course
Cloud Computing
with a consolidated score of 71 %
Online Assignments 24.53/25 | Proctored Exam 46.43/75
Total number of candidates certified in this course:23872
Jan-Apr 2024
(12 week course)
Prof. Haimanti Banerji
Coordinator, NPTEL
IIT Kharagpur
Indian Institute of Technology Kharagpur
swayam
Roll No: NPTEL24CS17S353409428
To verify the certificate
No. of credits recommended: 3 or 4



studies in AI and data science. These NPTEL certifications not only enhance the professional development of the faculty members but also contribute to the academic excellence and industry relevance of the AI-DS department at Sairam Engineering College. The dedication of Dr. Swagata Sarkar, Mr. Muthathamil Selvan, and Mr. Arun V exemplifies the department's commitment to fostering a culture of lifelong learning and innovation.




thank
you