RAMCO INSTITUTE OF TECHNOLOGY

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NBA Accredited UG Programs: CSE, EEE, ECE and MECH

Department of Electronics and Communication Engineering

Value Added Course

EVENT REPORT

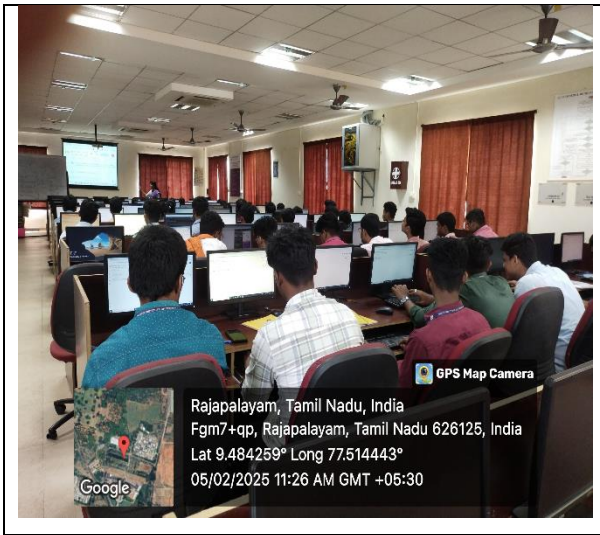
Event name	:	**Python Programming Essentials for AI Applications**
Date & time	:	03.02.2025 to 07.02.2025 & 9.30 A.M – 4.30 P.M
Participants	:	II year ECE Students

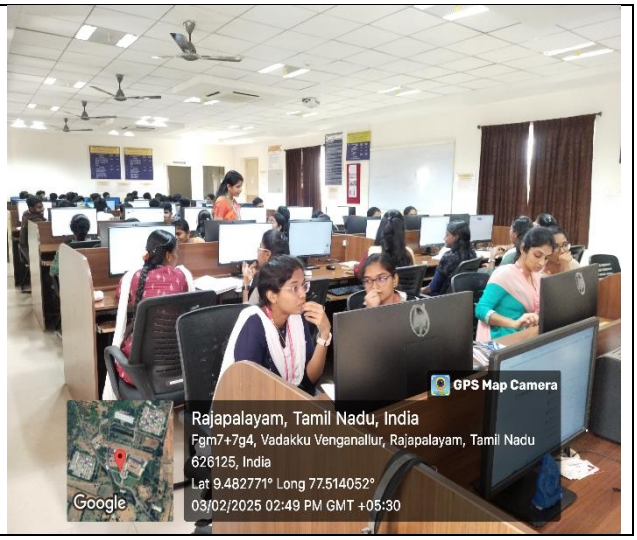
The department of Electronics and Communication Engineering organized a Value Added Course titled **"Python Programming Essentials for AI Applications"** from 03.02.2025 to 07.02.2025 for II year ECE students. Totally 62 students were actively participated in this programme.

In an enlightening and insightful session, Ms. L. Krishnakumari, AP/ECE, a leading expert in the field of Artificial Intelligence (AI), delivered a lecture titled "Introduction to AI" on 03.02.2025 from 9.30 A.M – 12.30 P.M . She began with a brief history of AI, discussing its evolution from early symbolic AI to modern machine learning (ML) and deep learning approaches. She explained the difference between narrow AI (designed for specific tasks) and general AI. The lecture explored the core components of AI, including machine learning, neural networks, natural language processing (NLP), and robotics. She provided a clear explanation of machine learning algorithms, highlighting how AI systems can learn from data without explicit programming.

She also delved into some key AI techniques, including supervised learning, unsupervised learning, and reinforcement learning. She explained how these methods are applied in various industries for tasks like classification, prediction, and decision-making. She introduced popular AI tools and frameworks, such as TensorFlow, Keras, and Scikit-learn, encouraging attendees to explore these resources for hands-on learning.

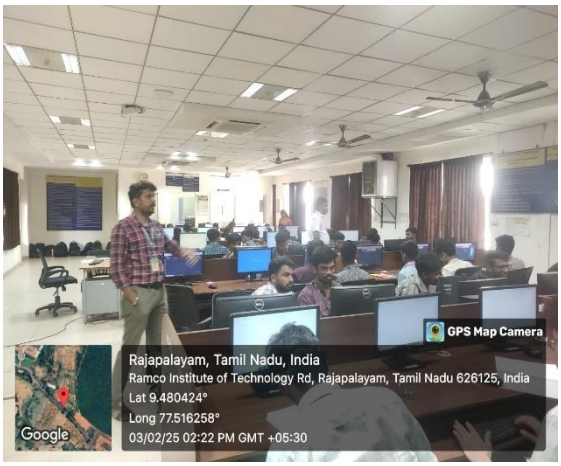
The lecture was met with widespread praise for its clarity and depth. Students were impressed by Ms. Krishnakumari's ability to explain complex AI concepts in an accessible way.





Dr. P. Venkatesh conducted a hands-on session on Writing Basic Python Programs as a value-added course on 03.02.2025 from 12.30 P.M – 4.30 P.M. The session aimed to equip participants with the foundational knowledge and skills to write basic Python programs and improve their coding proficiency. He provided a detailed overview of Python, highlighting its simplicity, readability, and versatility. He also discussed the benefits of learning Python for data analysis, machine learning, and web development. guided them through creating programs to perform simple tasks like calculating the factorial of a number and finding the sum of elements in a list.

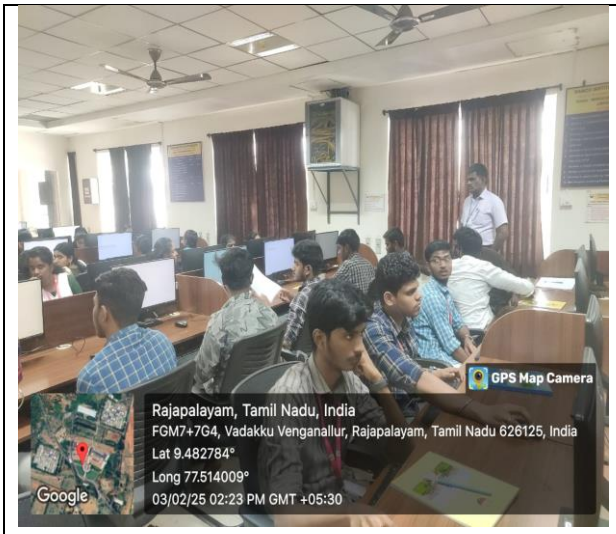
He emphasized the importance of following best practices while writing Python programs, such as using meaningful variable names, commenting code, and maintaining code readability. He also encouraged participants to practice writing clean and efficient code to improve their coding skills.Overall, the hands-on session on Writing Basic Python Programs conducted by him was highly informative and engaging. Participants gained valuable knowledge and practical skills that will help them advance in their programming journey. Dr. Venkatesh's expertise and guidance were instrumental in ensuring a successful learning experience for all participants.

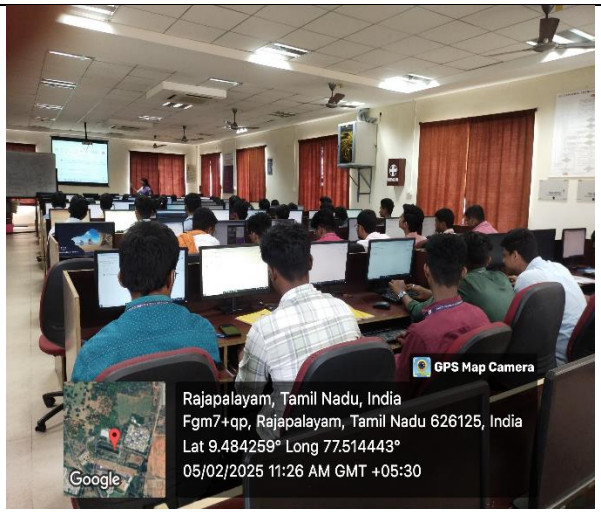


To enhance the technical skills of students and supplement their academic learning, a topic on **"Python Packages and Data Handling"** was conducted by Ms. S. Harini Shriram **and** Mr. R. Deivanayagam 04.02.25 from 9.30AM to 12.30 PM. The course aimed to enhance students' technical proficiency in Python programming with a focus on data manipulation and analysis using key libraries such as NumPy, Pandas, Matplotlib, and Seaborn. Through interactive sessions, hands-on coding, and real-world data applications, participants gained practical experience in data preprocessing, visualization, and analytics. The course was well-received, with active student participation and positive feedback, significantly contributing to their readiness for careers and higher studies in data science and related fields.

A Value-Added Course on **"Machine Learning Concepts and Case Studies"** was successfully conducted by Dr. S. Vairaprakash and Ms. L. Krishnakumari, on 05.02.25 from 9.30AM to 12.30 PM aimed at equipping students with a foundational understanding of machine learning principles and their practical applications. The course covered key concepts such as supervised and unsupervised learning, model training and evaluation, classification and regression techniques, and the use of algorithms like decision trees, SVM, and k-means clustering. Emphasis was placed on the theoretical understanding of machine learning workflows, along with real-time demonstrations using Python and relevant libraries like Scikit-learn.

The course also included detailed analysis of various real-world case studies, allowing students to explore how machine learning is applied across industries such as healthcare, finance, and e-commerce. Through interactive sessions, hands-on assignments, and group discussions, participants developed problem-solving skills and gained experience in building and evaluating predictive models.

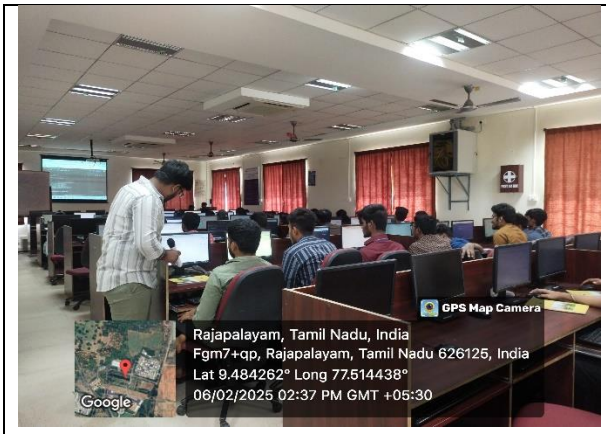


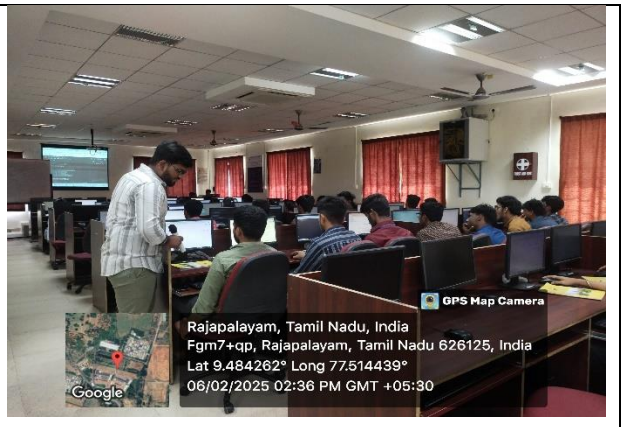


Mr.S.Lingesh, Adshi5 Pvt Ltd ,Chennai is the resource person of this training on 06.02.2025 from 9.30 A.M – 4.30 P.M . He handled the topic of "Machine Learning Concepts and Applications". He aimed to provide participants with both theoretical knowledge and practical experience in machine learning. The course attracted professionals, students, and tech enthusiasts eager to delve into the rapidly evolving world of machine learning. Mr.S.Lingesh, known for his expertise in AI and data science, meticulously designed the curriculum to address the fundamentals of ML while also showcasing real-world applications.

He emphasized practical applications, guiding students through case studies and live projects. Learners explored the development of recommendation systems, predictive analytics, and fraud detection systems, demonstrating the immense potential of ML in solving complex problems. The hands-on experience provided invaluable insights into how machine learning is already at the forefront of technological innovation. Students expressed their enthusiasm and appreciation for the course, with many highlighting the clarity of the instruction and the hands-on approach.

Ms.L.Krishnakumari, AP/ECE has given vote of thanks. Finally, feedback was collected.





Dr. S.Thayammal , Deep Dive Technologies , Sivakasi is the resource person of this training on 07.02.2025 from 9.30 A.M – 4.30 P.M. She handled the topic of "to Deep Learning and Implementation of the DL techniques in the projects" . She opened the lecture by providing a comprehensive introduction to deep learning, explaining its significance as a subset of machine learning. She elaborated on how deep learning algorithms, specifically neural networks, have revolutionized fields such as computer vision, natural language processing, and speech recognition. She focused on practical applications, showcasing how deep learning techniques are implemented in real-world projects. She emphasized the use of libraries like TensorFlow and PyTorch for building deep learning models. The lecture included step-by-step guidance on how to train, validate, and optimize deep learning models for specific tasks like image classification, object detection, and text generation.

She also addressed the common challenges faced when working with deep learning techniques, such as overfitting, underfitting, data scarcity, and the high computational cost of training models.

Dr.S.Vairaprakash, ASP/ECE has given vote of thanks. Finally, feedback were collected.