

Value Added Course on Python

8th December 2025



Event Name: A Value Added Course on Python for Networking, AI, ML and Deep Learning

Objectives: The program was conducted to introduce students to fundamental networking concepts and enable learners to utilize Python for networking, automation and basic security analysis. The initiative aimed to provide foundational knowledge of AI, Machine Learning and Deep Learning techniques, developing practical skills through hands-on projects in collaboration with industry experts.

Time: 4:00 PM - 7:00 PM, 8th December 2025 - 22nd December 2025.

Venue: CR-603/A, PJA Block, BMS College of Engineering

Organizing Bodies:

- Department of CSE (Internet of Things, Cyber Security and Blockchain)
Coordinator- **Prof. Tejashwini A G**, Assistant Professor, Department of CSE(ICB)
- BMSCE IEEE Student Branch
Coordinator- **Neha Ramiah**, SAC Coordinator, BMSCE IEEE Student Branch
- The Sensored Club
Coordinator- **Satyam Sinha**, Core Committee, The Sensored Club

Resource Persons (RPs): The sessions were delivered by a team of experienced industry experts and internal faculty, providing comprehensive technical guidance and real-world insights:

- **Mrs. Megha**, Co-Founder, MeViTechnologies
- **Mr. Abhiram**, Security Engineer, jungle games
- **Prof. Krupa K S**, Assistant Professor, BMSCE Bangalore
- **Prof. Sushma E**, Assistant Professor, BMSCE Bangalore

Agenda Overview:

The program followed a structured progression over 42 hybrid hours designed to build practical skills from the ground up.

- **Module 1 (Networking Fundamentals):** IP Addressing, OSI Model, Core Networking Concepts
- **Module 2 (AI, ML, & Deep Learning):** Introduction to AI/ML, Deep Learning Fundamentals, Architecture of Neural Networks, Deploying Machine Learning Algorithms from Scratch
- **Module 3 (Python for Networking & Security):** Packet Structure using Scapy, Wireshark Traffic Inspection, Building a Python Security Checker, Performing Packet Analysis Tasks, Mini-Network Analyzer Tool

Brief Summary: “Hands-On Python for Networking, AI, ML & Deep Learning”: a two-week Value Added Program, was organized as a joint technical initiative by the Department of CSE (Internet of Things, Cyber Security and Blockchain), BMSCE IEEE Student Branch and the Sensored Club.

The curriculum established core technical competencies through modules on Basic Python, Data Visualization and networking fundamentals centered on the OSI Model. These foundational elements supported advanced coursework in Data Analytics, Machine Learning, and Deep Learning, where theoretical instruction was reinforced through hands-on projects including the development of Artificial Neural Networks (ANN) for predictive analysis.

The program further provided specialized training in cybersecurity including the application of Python for Network Security and Packet Analysis. This segment encompassed Web Security and Wireshark usage, covering credential capture simulations and packet inspection methodologies to demonstrate techniques for identifying and assessing network vulnerabilities.

Number of participants: 31

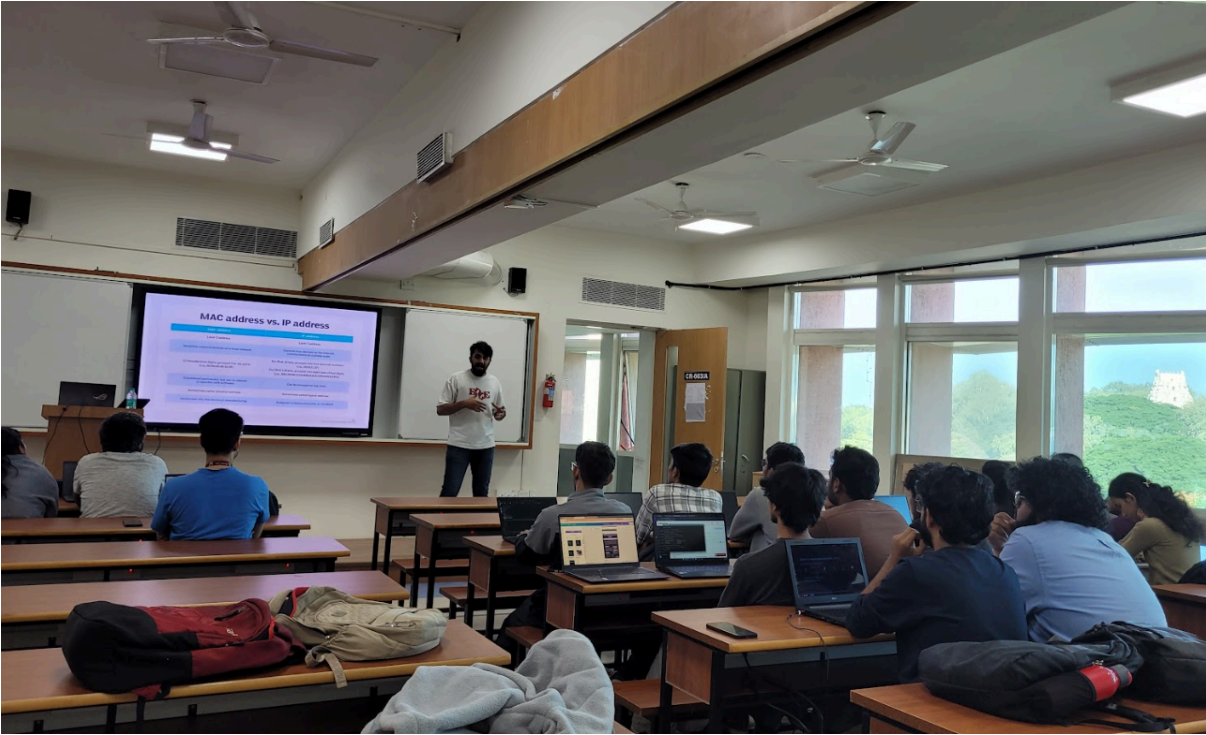
	IEEE Members	Non-IEEE Members
Number	12	18

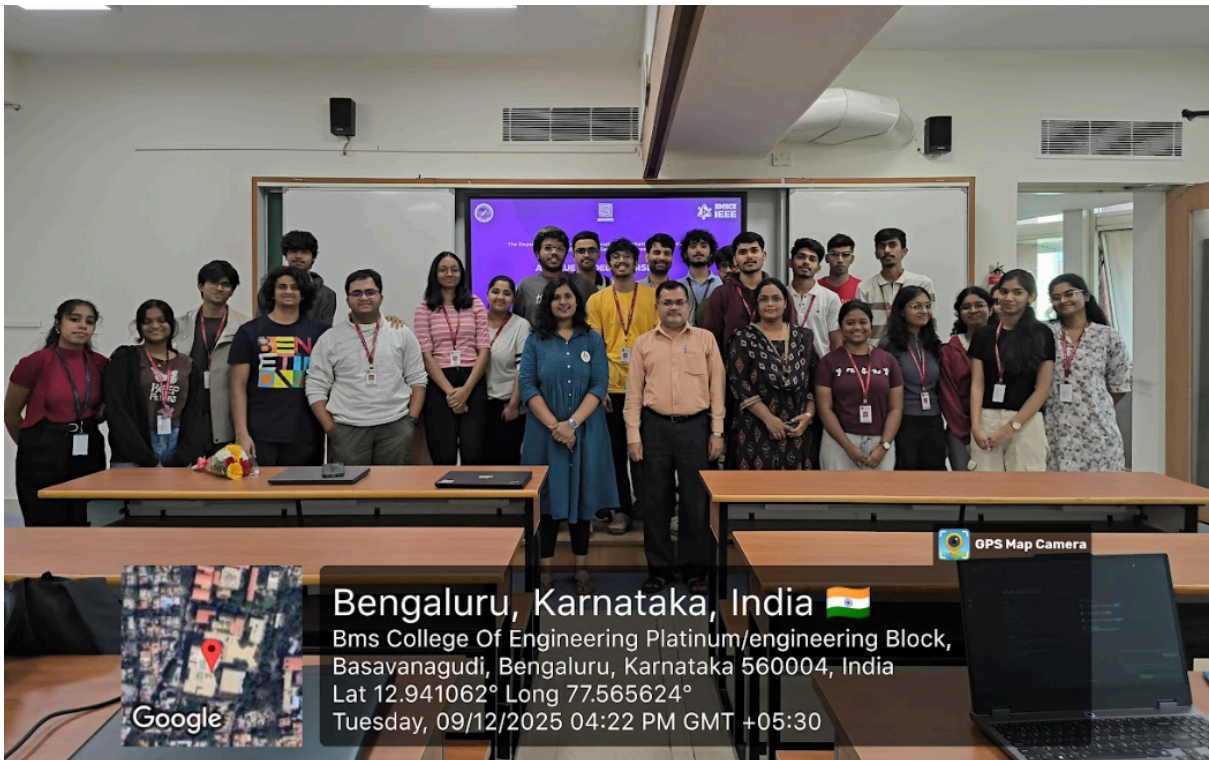
Outcomes: The workshop bridged the gap between theoretical computer science concepts and their practical utility in modern cybersecurity and AI landscapes moving beyond standard classroom learning. Students gained the confidence to manipulate network traffic programmatically and deploy their own machine learning algorithms from scratch. This comprehensive exposure refined their technical coding skills while cultivating a critical problem-solving attitude.

Participant Feedback

The Value Added Course was positive, with participants commending the structure and the practical, hands-on projects. Feedback highlighted that the expertise of the Resource Persons from both industry and academia was crucial in bridging the gap between theoretical knowledge and real-world application. Students particularly appreciated the opportunity to build tools like the Python security checker and the mini-Network Analyzer

Event Picture(s):





Date: 22nd January, 2026

Report By:

Nithyaneshwar A

SAC Coordinator

BMSCE IEEE Student Branch