VALUE ADDED COURSE: PYTHON FOR DATA SCIENCE – SESSION III

Target Audience: II Year AI & DS, CSE (DS)

Mentor: Dr. Sudheer Reddy Bandi

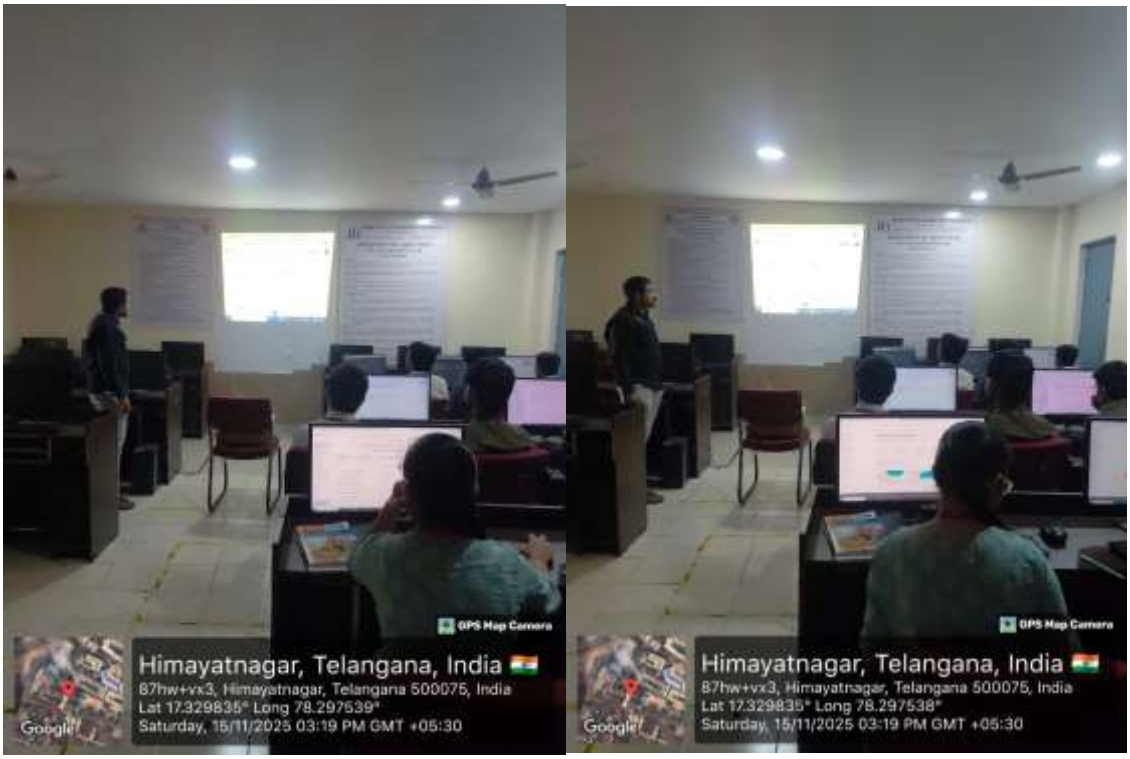
Date: 15 November 2025

Time: 2:10 PM – 4:10 PM

Venue: Lab 105, AI&DS Block, JBIET

INTRODUCTION

The Value Added Course on Python for Data Science is designed to equip second-year students of AI & DS and CSE (Data Science) with essential computational and analytical skills required for modern data-driven applications. As Python is the foundational language for Machine Learning, AI, and Data Science workflows, this course bridges classroom concepts with hands-on practical exposure, strengthening both technical competence and problem-solving ability.



SESSION III OVERVIEW

Session III focused on the Seaborn Visualization Library and the Basics of Google Colab, two critical tools in the data science ecosystem. The session enabled students to understand how to explore, analyze, and visualize datasets using Python's rich scientific computing environment.

The session began with an introduction to Seaborn, covering key topics such as dataset loading, statistical plotting, styling options, and creation of common visualizations like histograms, pair plots, boxplots, and heatmaps. Students practiced interpreting visual patterns, identifying correlations, and presenting insights effectively.

The second part of the session emphasized Google Colab as a collaborative computational platform. Students learned how to run Python notebooks in the cloud, import datasets, mount Google Drive, install libraries, and execute reproducible code. This gave them a strong foundation for future coursework, mini-projects, and hackathons.

LEARNING OUTCOMES

By the end of Session III, students were able to:

- Understand the importance of visualization in Data Science workflows.

- Use the Seaborn library to generate meaningful statistical plots.

- Perform exploratory data analysis (EDA) using visual tools.

- Navigate Google Colab efficiently and manage notebooks in the cloud.

- Apply Python-based visualization techniques to real-world datasets.

- Improve analytical thinking, interpretation skills, and collaborative coding ability.

IMPACT AND BENEFITS

This Value Added Course enhances the employability and domain readiness of II Year students by giving them early exposure to industry-aligned tools. The hands-on training supports their academic growth, prepares them for advanced courses such as Machine Learning, Deep Learning, and Artificial Intelligence, and nurtures a strong foundation for internships and research projects. Engaging, practice-oriented sessions like these help students confidently transition from theoretical understanding to practical implementation—one of the core goals of the AI & DS and CSE (DS) programs.