IEEE Student Branch, LDRP-ITR

July 6th-10th, 2024

STTP on “Essential Python Libraries for Data Visualization & Data Analysis”

IEEE Event Report

Organized by

MCA Department, LDRP-ITR

Introduction

- The Department of MCA & IEEE Branch Cell organized a five-day training program on ‘Essential Python Libraries for Data Visualization and Data Analysis’ from 4th to 10th July, 2024. The program aimed to develop machine learning skills among students and faculty, covering key Python libraries like Pandas, NumPy, MatPlotLib, TensorFlow, and Scikit-learn through hands-on sessions and interactive discussions. A total of 57 students and 42 faculty members attended these sessions, enhancing their proficiency in data analysis and visualization techniques.

- Well-equipped computer labs were provided for practical tasks, and the program fostered interdisciplinary collaboration by inviting faculty from various departments. Daily breakfast and lunch were organized to encourage networking and idea-sharing among participants.

- The initiative emphasized the importance of interdisciplinary collaboration, breaking down silos, and encouraging innovation in data science. It demonstrated the department’s commitment to high-quality education and a collaborative learning environment, equipping participants with essential skills in data visualization and analysis.

Session Brief

The first day started with Saraswati Vandana, followed by introduction to the speakers. Essential Python Libraries for Data Visualization & Data Analysis were introduced, along with practical sessions to reinforce learning.

Day 1

Introduction

On the second day, participants learned about machine learning and Python library NumPy. NumPy's role in mathematical operations and its applications in data science and machine learning were explained in detail.

Day 2

NumPy Library

On the third day, participants delved into the Pandas library, exploring its powerful data analysis features and practical applications, gaining essential skills for effective data manipulation.

Day 3

Pandas Library

On the fourth day, participants explored Matplotlib for data analysis, received comprehensive materials and datasets for hands-on practice, and were given a practice set to enhance their skills.

Day 4

Matplotlib Library

On the final day, participants were introduced to the Seaborn library for data visualization, followed by a quiz and an appreciation program to conclude the event.

Day 5

Seaborn Library

Our Speakers

Prof. Mahendra Khambhalia

Prof. Mahendra Khambhalia is an Assistant Professor in the MCA Department at LDRP Institute of Technology and Research. He is an expert in Advanced Networking, System Software, Soft Computing, and Data Science. Prof. Khambhalia's innovative approaches and teaching methods make complex topics accessible to his students. His extensive experience and expertise make him a valuable speaker and educator in the tech community.

Dr. Bhrantav Vora

Dr. Bhrantav Vora is an Assistant Professor in the MCA Department at LDRP Institute of Technology and Research. He specializes in Machine Learning, Artificial Intelligence, and Natural Language Processing. Dr. Vora has developed advanced recommendation systems and innovative web development solutions. He is known for making complex concepts accessible and bridging theoretical research with practical applications.

Outcomes

The Short Term Training Program on 'Essential Python Libraries for Data Visualization and Data Analysis' successfully achieved its goals of enhancing participants' skills and fostering interdisciplinary collaboration. Participants gained a solid foundation in using essential Python libraries for data analysis and visualization, equipped with both theoretical knowledge and practical experience. The program also encouraged networking among students and faculty, facilitating the exchange of ideas and promoting a collaborative learning environment. Overall, the initiative demonstrated the department's commitment to providing high-quality education and supporting the professional growth of its participants.

01

Improved Data Analysis Skills

Participants became proficient in essential Python libraries, allowing them to handle complex data analysis and visualization tasks.

02

Practical Experience

The hands-on sessions gave participants real-world practice, increasing their confidence in using these tools.

03

Teamwork Across Departments

The program united faculty and students from various departments, fostering a collaborative environment and the exchange of ideas.

04

Better Networking Opportunities

Daily networking sessions during breakfast and lunch helped participants build professional connections and share insights, enriching their learning experience.

Event Highlights

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