GTC Transforming Emerging Economies

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Python for AI & Data Science

COURSE OVERVIEW

This course introduces participants to Python programming with a focus on its application in artificial intelligence (AI) and data science. Designed for beginners, the course covers essential Python syntax, data structures, and libraries commonly used in AI and data analysis, such as NumPy, Pandas, and Matplotlib. Participants will learn how to write basic scripts, manipulate data, visualize results, and prepare datasets for machine learning models. By the end of the course, delegates will have the skills to start building simple data-driven applications and confidently use Python as a key tool in AI and data science projects.

WHO SHOULD ATTEND?

This course is ideal for beginners, aspiring data scientists, AI enthusiasts, researchers, and professionals from non-programming backgrounds who want to gain practical skills in Python for use in data analysis and AI projects. It is also suitable for students, analysts, business professionals, and anyone looking to transition into roles involving data-driven decision-making or machine learning development. No prior programming experience is required.

COURSE OUTCOMES

Delegates will gain the knowledge and skills to:

- Comprehend the basics of Python programming, including syntax, variables, and data types.
- Work with core data structures such as lists, dictionaries, and tuples.
- Write and execute Python scripts for data manipulation and analysis.
- Use key Python libraries like NumPy, Pandas, and Matplotlib.
- Perform basic data cleaning, transformation, and visualization.
- Prepare datasets for use in machine learning and AI applications.
- Build a solid foundation for more advanced study in data science, machine learning, and artificial intelligence.

KEY COURSE HIGHLIGHTS

At the end of the course, you will understand;

- Python fundamentals: syntax, variables, loops, and functions.
- How to work with data structures like lists, dictionaries, and arrays.
- The use of Python libraries (NumPy, Pandas, Matplotlib) for data manipulation and visualization.
- Data cleaning and preprocessing techniques.
- How to explore basic data analysis and interpretation using Python.
- Preparation of datasets for machine learning applications.
- How Python integrates into AI and data science workflows.
- Coding exercises and mini-projects.
- How to build a foundation for further learning in advanced AI and data science topics.

All our courses are dual-certificate courses. At the end of the training, the delegates will receive two certificates.
1. A GTC end-of-course certificate
2. Continuing Professional Development (CPD) Certificate of completion with earned credits awarded