PGCP in AI/ML

First Semester

Duration – 80 Hours

Program Description

This program builds essential skills for data and AI-driven work, starting with Python programming for automation and data manipulation.
Participants apply statistical techniques—probability, hypothesis testing, and regression—to uncover insights. They learn Data Analysis & Business Intelligence to turn raw data into actionable strategies with visualizations and dashboards.
Data Engineering training covers building pipelines, managing databases, and creating scalable architectures. Graduates leave equipped to transform data into impactful, real-world solutions.

Learning Goals

- Develop a solid foundation in programming using Python to create efficient, reusable, and scalable code for data-related tasks.
- Apply statistical methods to analyse data, identify trends, and support evidence-based decision-making.
- Transform raw datasets into clear, actionable business insights using data cleaning, visualization, and business intelligence tools.
- Design and manage robust data pipelines and architectures to ensure reliable, scalable, and efficient data storage, processing, and delivery.

Course Topics

- PYTHON PROGRAMMING
- STATISTICAL TECHNIQUES
- DATA ANALYSIS & BUSINESS INTELLIGENCE
- DATA ENGINEERING

Second Semester

Duration – 80 Hours

Program Description

This training program covers the foundations and advanced concepts of Machine Learning, Neural Networks, and NLP, progressing into Generative AI applications. Participants will practice data preprocessing, model training, and evaluation, along with deep learning for NLP tasks like classification and language generation. The course explores advanced generative models, including transformers and diffusion systems, for creative and industry uses. Hands-on exercises, case studies, and projects build skills in designing and optimizing AI solutions.
An Integrated Capstone Project challenges learners to create a full AI system from concept to deployment for real-world problems.

Learning Goals

- Grasp core concepts of Machine Learning, including types of learning, evaluation metrics, and optimization.
- Understand Neural Network architectures and apply them to key NLP tasks.
- Build and experiment with Generative AI models for text, images, and more.
- Apply ethical, bias-aware, and responsible AI practices.
- Design and deploy complete AI solutions through an Integrated Capstone Project.

Course Topics

- MACHINE LEARNING
- NEURAL NETWORKS AND NATURAL LANGUAGE PROCESSING
- GENERATIVE AI
- INTEGRATED CAPSTONE PROJECT