

Specialized Training Programme in Solving Real World Problems using Artificial Intelligence

Duration: 2 weeks (18 Mar, 2025 to 31 Mar, 2025)

Course Content

Week 1:

- Introduction to Artificial Intelligence (AI)
 - Applications of Artificial Intelligence
- Python Programming
 - Python Basic Concepts, Python data structures, Control Structures,
 - Functions
- Python Libraries for Data Analysis
 - Mathematical Computing with Python (NumPy), Data Manipulation with Pandas
 - Machine Learning with Scikit-Learn, Introduction to Data Visualization in Python (matplotlib)

Week 2:

- Mathematics for Artificial Intelligence
 - Vector, Scalar, Matrix and operations on matrix, Basics of Statistics
- Data Preparation & Visualization
- Machine Learning Concepts & Algorithms
 - Supervised and Unsupervised Learning, Classification and Regression
- Introduction to Deep Learning
 - Artificial Neural Networks, Activation Functions
- Case Studies