Certificate Course in AI and Machine Learning

Duration (In Hours): 40 Hours/4Weeks (@ 2 hours Daily)

Course contents

Unit 1: Artificial Intelligence

Introduction to Artificial Intelligence (AI), Current Trends & Terminologies in AI, Applications and Challenges in AI.

Unit 2: Python Programming

Introduction to Python, Python Data types, Statements & expressions, Flow control & loops, Lists, and dictionaries.

Unit 3: Exploratory Data Analysis

Numpy Library: Array types, Array slicing, Universal functions, Aggregations, N-Dimensional arrays, sorting arrays, loading data in Numpy from various formats.
Pandas Library: Pandas objects – Series and Data frames, Data indexing and selection, NaNobjects, Manipulating Data Frames, Grouping, filtering.
Visualizations with Matplotlib Library using various charts such as Bar Graphs, Histogram, Scatter Plot, Area Plot, Pie Chart.
Feature Engineering: Numeric & Categorical features, Normalization, Min Max Scaling, Standardization, Imputation.

Unit 4: Machine Learning

Introduction to Machine Learning, Algorithm types of Machine learning, Supervised Learning – Classification with Logistic Regression, Regression with Linear Regression,Unsupervised Learning – Clustering with K-Means.