Machine Learning and Data Science

Python Programming
- Datatypes, operators and Strings
- Control structures – if, else, elif; Loop – for- while
- Containers – list – dictionary – tuple – sets
- Functions
- Recursion
- OOPs

Introduction to packages
- NumPy
- Pandas
- Matplotlib

Introduction to AI and Machine Learning
- Understanding- AI, ML, Deep Learning, Data Science, and Big Data
- Pre-processing-Missing value handling, Encoding, scaling and normalization., Binning, Discretization

Data Analytics
- Data Analysis using SQL
- Familiarize PowerBI
- Visualization in Python
- Exploratory Data Analysis

Exploring and using data sets
- Data Collection: Organizing data in different formats -Handling unstructured data.
- Image and Text processing

Supervised vs. Unsupervised learning
- Regression
- Classification
- Clustering
- Rule Mining

Artitifcial Neural Networks
- Perceptron
- MLP
- Deep Neural Networks

Deep Learning
- TensorFlow
- PyTorch
- Convolutional Neural Networks (CNNs)
- Transfer Learning Approaches for small datasets
- RNN and its Variants

(16-20 HOURS / 8-10 WEEKS)