Machine Learning Basics

Prerequisites (5 days)

- Learning Python.
- Laptop setup for workshop.

Data Science (1 days)

- Libraries (numpy and pandas)
- Data acquisition
- Data relation
- Statistics and code representation
- Data pre-processing
- Data Visualization (Matplotlib, Seaborn)

Machine Learning (3 days)

- Types of learning
- Regression models
- Classification models
- Clustering models
- Ensemble algorithms (Bagging and Boosting)
- Model metrics
    - Accuracy
    - Precision
    - Recall
    - F1-Score
    - Confusion matrix

Deep Learning (2 days)

- Basics

- Perceptron Model
- Forward and Back Propagation
- Activation Functions
- Neural Networks
  - CNN