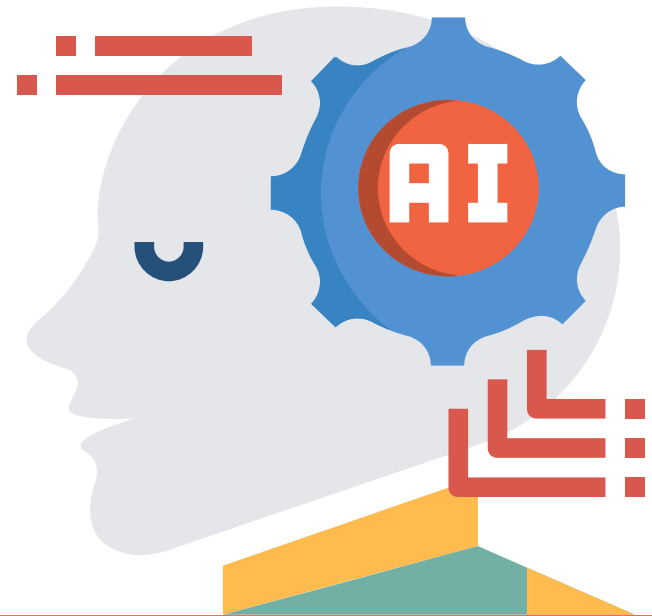


MACHINE LEARNING & AI WITH PYTHON



This workshop will introduce students to data exploration and machine learning techniques. Students will learn about Students will also explore the differences between supervised and unsupervised learning techniques and practice creating predictive regression models the deal with data workflow and will practice exploring and visualising data using Python and built-in libraries.

Day 1 - Developing the Fundamentals

Module 1: Introduction to Machine Learning

What is machine learning?

Installation and update of tools

Machine learning algorithms

Module 2: Exploring and using data sets

Learn the steps to pre-process a dataset and prepare it for machine learning algorithms

Module 3: Supervised vs. unsupervised learning

Review of machine learning algorithms

**Classification, linear regression and
logistic regression**

Random forests, clustering

Decision trees

Module 4: Model Evaluation

**Feature Engineering and Model
Selection**

Model Evaluation Metrics - Accuracy,

RMSE, ROC, AUC, Confusion Matrix,

Precision, Recall, F1 Score

Overfitting and Bias-Variance trade-off

Cross Validation

Learning Outcomes

After this workshop, you will be able to:

**Collect data from a variety of sources
(e.g., Excel, web-scraping, APIs and others)**

Explore large data sets

**Clean and "munge" the data to prepare
it for analysis**

**Apply machine learning algorithms to
gain insight from the data**

Visualize the results of your analysis

Build your own library and Python script

Program Details
Training Duration :- 28-30hrs
Project :- Included in the program