MACHINE LEARNING WITH PYTHON

COURSE CODE: MOOCCAP-A05 **DURATION: 10 Hrs.**

Course Prerequisites:

Must have experience with Python Programming.

What you will learn?

1. How Machine Learning Works?
2. Different Machine Learning Algorithm and its implementation.
3. Use Python for Machine Learning.
4. Learn to use NumPy
5. Learn to use Pandas

Course Description:

This course is designed to make the learner understand the basic concepts of Machine Learning and how to implement it with Python. This course imparts basic and intermediate skills used in the Machine Learning.

COURSE DETAILS

MODULE 1: Basics of Machine Learning

TOPIC 1: Introduction to Machine Learning

Lecture 1.1: Machine Learning & Its Application Workflow of Machine Learning
Lecture 1.2: Types of Machine Learning, Supervised Learning
Lecture 1.3: Unsupervised Learning
Lecture 1.4: Types of Unsupervised Learning
Lecture 1.5: Reinforcement Learning

MODULE 2: Python: NumPy

TOPIC 1: Anaconda Navigator and Jupyter

Lecture 1.1: Installing Anaconda Navigator and Jupyter

TOPIC 2: NumPy

Lecture 2.1: What is NumPy?
Lecture 2.2: NumPy: Array
Lecture 2.3: NumPy: Multi-Dimensional Array
Lecture 2.4: NumPy: Array Slicing
Lecture 2.5: NumPy: Array Concatenation and Split

MODULE 3: Python: Pandas Part-1

TOPIC 1: Pandas Part-1

LECTURE 1.1: Basic of Pandas – 1
LECTURE 1.2: Basic of Pandas – 2
LECTURE 1.3: Pandas: Data Frame
LECTURE 1.4: Pandas: Read CSV File
LECTURE 1.5: Pandas: Write CSV File
LECTURE 1.6: Pandas: Handling Missing Values – 1

LECTURE 1.7: Pandas: Handling Mission Values – 2
LECTURE 1.8: Pandas: Fillna()
LECTURE 1.9: Pandas: Replace()

MODULE 4: Python: Pandas Part-2

TOPIC 1: Pandas Part-2

LECTURE 1.1: Pandas: Interpolate()
LECTURE 1.2: Pandas: loc() & iloc()
LECTURE 1.3: Pandas: GroupBy Function
LECTURE 1.4: Pandas: Merging Function
LECTURE 1.5: Pandas: Concat()
LECTURE 1.6: Pandas: Join()
LECTURE 1.7: Pandas: Append()
LECTURE 1.8: Pandas: pivot()
LECTURE 1.9: Pandas: melt()
LECTURE 1.10: datetimeindex()

MODULE 5: Machine Learning Algorithm

TOPIC 1: Algorithm

LECTURE 1.1: Data preprocessing techniques
LECTURE 1.2: Download Datasets from Kaggle
LECTURE 1.3: Linear Regression Algorithm Theory
LECTURE 1.4: Linear Regression Algorithm implementation
LECTURE 1.5: Polynomial Regression Algorithm Theory
LECTURE 1.6: Polynomial Regression Algorithm Implementation
LECTURE 1.7: Classification: Decision Tree Theory
LECTURE 1.8: Classification: Decision Tree Implementation
LECTURE 1.9: Classification: Random Forest Theory
LECTURE 1.10: Classification: Random Forest Implementation
LECTURE 1.11: KNN (K Nearest Neighbor)