XALTIUS
Towards Higher Excellence

Let's train our Model..

Machine Learning using Python

Understanding and analyzing data is one of the key skills required in the industry today. This course is completely focused on the various aspects of data analytics using Python and taken through the key libraries for data ingestion and manipulation, exploratory data analysis, model building and data visualization.

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Start your data science journey with us.

Basic knowledge of Python is required to attend this course.

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A short course in 16 hours.

What You'll Learn

Machine Learning with Python is an advanced level course in understanding how to perform predictive analytics using complex algorithms and machine learning. Participants will learn to write programs in Python which can perform complex level of analytics and create, predict and evaluate using various machine learning models. Participants who complete learning these skills will finish the course at an advanced level of Python and will be ready to take up further advanced courses in machine and deep learning.

Learn how you can put your data to good use.

About the Course

These are the key takeaways that participants will gain:

- Understand the basic concepts of scikit-learn
- Learn the nuances of machine learning
- Learn when to apply unsupervised learning algorithms
- Nuances of how unsupervised machine learning algorithms work
- How to apply supervised learning algorithms to business cases
- Learn how to code supervised learning algorithms using Python
- Learn how to test and validate machine learning models
- Keys concepts of model evaluation and performance metrics
- Learn to optimize machine learning models using various techniques
- Learn advanced machine learning algorithms

It's about your goals & your future!

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Course Outline

Module 1: Fundamentals of Data Preparation

Understand the pre-requisites to machine learning in terms of the functional and non-functional process.

- Reinstating the basic techniques in python as a prerequisite to machine learning

Module 2: Introduction to Machine Learning with Scikit-learn

The objective is to understand the basics of machine learning and what it means. The module also introduces the basic concepts of supervised and unsupervised machine learning and gives an introduction to a very important library used for machine learning on Python – scikit-learn.

- Introducing the machine learning flow and concepts
- Functions within scikit-learn
- Introduction to supervised and unsupervised machine learning

Module 3: Unsupervised Machine Learning

This module aims to equip participants with the fundamentals of unsupervised machine learning using a very popular python library called scikit-learn. Unsupervised learning is very important across various business cases today, right from customer segmentation to property analysis.

- Understanding unsupervised ML algorithms
- Introduction to clustering (k-means, SOM)
- Implementing clustering with real use cases

Module 4: Supervised Machine Learning

Supervised machine learning is one of the most popular technique in machine learning today. This module will stress on some of the most popular algorithms in regression and classification and equip participants with an understanding of how the algorithms work and where they can be used.

- Introduction to various supervised learning algorithms
- Understanding feature engineering and feature sets
- Implementing various Supervised ML algorithms with real use cases

Module 5: Evaluating Machine Learning Models

One of the key steps in the data science lifecycle is to evaluate machine learning models to make sure the right one is selected for use in the business. Also, these models need to be trained and optimized over time. This module aims to do just that by covering the techniques aiding model selection and evaluation and optimization.

- Understanding model selection and evaluation methods
- Optimize machine learning models

Join us & launch your career in data science.

It's time to upskill for the Industry 4.0

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