

MACHINE
LEARNING



python

Microsoft

*Technology
Associate*

Machine Learning with Python – 4 days' Workshop

This workshop will introduce students to machine learning techniques using **PYTHON**. some of the things Students will learn are how to explore the differences between supervised and unsupervised learning techniques

Understanding Python

Opp's

Object Oriented Programming What is OOP
Basic class
Constructor

inheritance

Override method abstract class operator

overloading method overloading

Python

Installing python Variables Strings Numbers

Get Variable Value How to Program Math
Operators Built-in Functions Simple Sum

Lists

List Indexing and Slicing List Slicing Examples For
Loop with Conditional Block (Practice) Solution
File Content Length (Practice)
Solution

Functions, Conditionals, and Loops (Practice)
Solution

Writing Text to a File

Appending Text to a File

Reading and Appending Text to a File Write
Multiple Lines in a Text File (Practice) Tip: Writing
Multiple Lines in a Text File

Advance features

Section Introduction

Setting Up

While Loop

While Loop with Password Checker String

Formatting

Modules, Libraries, and Packages Installing Python
Libraries

Dates and Times

Datetime Formatting Codes Looping Multiple

Sequences

The "with" Context Manager

Files, Loops, Functions, and Conditionals Solution

Merging Text Files

Tips: Merging Text Files

Fixing errors

Syntax Errors

Runtime Errors

Errors

How to Fix Difficult Errors Good Programming

Questions Error Handling

Introduction to REST APIs

How can we make our own API? What is Flask?

Python cls() and argument unpacking

Creating the User model for our application Started developing the User model

Creating the login and register

Finding blogs by a specific author

Allowing creation of blogs and posts Creating the static resources and templates

Introduction to Machine Learning

- What is machine learning?
- Installation and update of tools
- Machine learning algorithms

Exploring and using data sets

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

Supervised vs. unsupervised learning

- Review of machine learning algorithms
- Classification, linear regression and logistic regression
- Random forests, clustering
- Decision trees

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

Fees Rs :-2880 + GST-: **With Microsoft MTA Certification 98-381**



Training | Assessment | Certification | mini Project



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ATS Learning Solutions



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