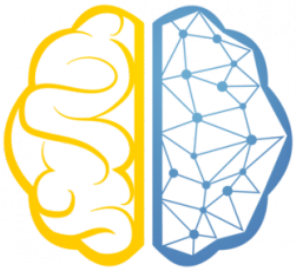
TRAINING PROGRAM



MACHINE LEARNING [ML]

Machine learning is an application of artificial intelligence (AI) that provides systems the ability to automatically learn and improve from experience without being explicitly programmed. Machine learning focuses on the development of computer programs that can access data and use it learn for themselves.

KEY FEATURES

Effective Upskilling Planned Curriculum
Team Learning Awesome Quizzes
Complete Hands on

The below Curriculum is Schedule for 2 weeks

CURRICULUM

Discussing Whole Course Agenda
Description of Artificial Intelligence & ML
Real-time Examples and Implementations of ML
About Python Programming and need
Installing Python
Getting Started with Python IDLE and Executing First Program

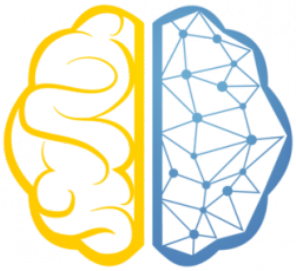
Variables and Data
Numbers & String
Learning More Datatypes and doing examples
List & Sets
Tuples in Python Dictionaries in Python Looping in Python - For Loop
Conditional Statements - If-Else & Elif
While and Do While Loops
The For…. Loop
Comparison & Arithmetic Operations

Functions
Defining a Function
Calling a function
Function Arguments
Built-In- Functions
Classes
Creating a class & Object

Data Science with Python
What is Data Science
Different Sectors using Data Science
Exploratory Data Analysis Quantitive & Graphical Techniques Data Analysis Conclusion & Predictions Data Types for plotting

Mathematical Computing using Python
Getting Started with Numpy
Activity Sequence
Creating and printing an array(Numpy Array)
Class and Attributes of array
Basic Operations Activity-Slicing Copy & Views
Mathematical Functions of Numpy
Advance 3-D Slicing

SAK INFORMATICS
Corporate office: #401, Venkata Satyadeva Enclave, Balaji Colony, Nizampet-90



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CURRICULUM

Scientific Computing with Python
Introduction to Scipy
SciPy sub Packages
Eigenvalues & Eigenvectors

Data Manipulation with Pandas
Introduction to Pandas Data Types
Understanding Pandas
Series Understanding Pandas DataFrame
Missing Values & Data Operations File Read & Write Support

Python for Data Visualisation
Introduction to Matplotlib
Matplotlib Setup and Plots
Matplotlib Exercises
Data Visualisation using Seaborn

Introduction to seaborn
Distribution & Categorical Pots
Matrix Plots
Regression Plots
Grids and Styles
Seaborn Exercises

Introduction to Machine Learning
What is Machine Learning?
Machine Learning in Python

Types of Learning
Supervised Learning
Unsupervised Learning
Reinforcement Learning
Types of Problems- Regression vs Classifications

Approach and Algorithms
Linear Regression
Linear Regression Theory and Mathematics
Understand Training & testing Sets
Creating a Linear Regression Model
Train the model using Training Data Set
Predictions and Error Evaluations Evaluation Metrics
MSE-Mean Squared Error
MAE-Mean Absolute Error
RMSE-Root Mean Squared Error
Linear Regression Exercises
E1- Sales Predictions E2- Salary Predictions
Logistic Regression Theory
Logistic regression implementation and conclusion
Exercises and Evaluation

Understanding K Nearest Neighbors Algorithm
KNN theory
KNN with Python
Implementing KNN on a classification Exercise

Image Feature Extraction
Basics of Computer Vision & Open CV Image Manipulation
Image Segmentation Object Detection Installing Open-CV
Uses and Implementation of Open Cv
Using Open CV to extract the feature of an Image
Import Dogs and Cats Images
Extract the pixel values from the images