



TECHHUB SOLUTIONS

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Machine Learning

Main Topic	Sub Topic
Introduction To Python	Introduction to Python Brief Overview of Python Applications of Python Advantages of Python Overview Machine Learning with Python Introduction to the Basics of Python Programming Operators Loops: while & for Conditionals: if-else Functions: Defining Functions, Anonymous Functions Python Data Structure Numbers String List Tuple Dictionary
Introduction To NumPy	Importance of Array Creation of Array Array operation Linear Algebra Array Methods
Introduction To Pandas	Pandas Series Pandas Dataframe Working with Structured & Unstructured Data Accessing Tabular Data Panadas methods Data analysis using Pandas Accessing Row & Column data Data Filtering & Cleaning Accessing indexed data Indexing/Reindexing

	Statistical Interpretation Data Wrangling Data Analysis Store Dataframe to file
Introduction To Data Visualization	Introduction to Matplotlib Visualization of Array Data Visualization of Excel Data Different types of plotting Line Graphs Bar Plots, Histograms, Box Plot, Stacked Plots, Scatter Plot, Pie Chart Data Analysis & Data Visualization using Matplotlib Linestyles and Color Multiple Lines on Same Plot Controlling Line Properties Adding Labels, Gridlines, Annotations X and Y Ticks and Rotations Legends Working with Multiple Figures and Axes Share X and Y-Axis Adding Subplots
Introduction To Machine Learning	Part A: Introduction to Machine Learning Application fields of Machine learning Advantages of Python in Machine Learning Steps towards Machine Learning Understanding of Algorithms (Supervised & Unsupervised) Feature Selection Hyperparameter Tuning Application and Implementation of Scikit Learn Part B: Data Processing & Machine learning: Supervised Learning Supervised Learning Introduction Supervised Learning Algorithms Regression Linear Regression Classification: Logistic Regression K-Nearest Neighbor Naïve Bayes Decision Tree Random Forest Part C: Data Processing & Machine learning: Unsupervised Learning Unsupervised Learning Introduction

	Unsupervised Learning Algorithms Clustering: K-Means Clustering Dimension Reduction Principle Component Analysis
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