

Machine learning using python

- What is machine learning?
- Applications of Machine learning
- Supervised learning
- Unsupervised learning
- Classification
- Regression
- Clustering
- Basics of python
- Installing required python packages
- Numpy
- Pandas
- Sklearn
- Matplotlib
- Data preprocessing
- Regression
- Linear Regression
- Logistic regression
- KNN
- Gaussian Naïve
- Decision Tree classifier
- Random Forest classifier
- Support vector machine
- k means clustering.
- Deep learning
- tensorflow
- project

Detail syllabus

Chapter 1: Introduction to Machine learning

- What is machine learning
- Supervised learning
 - Classification
 - Regression
- Unsupervised learning
 - Clustering
- Semi supervised and reinforcement learning
- Application of Machine learning

Chapter 2:Python

Installing python /anaconda

Simple python program

Data type

Control structure

Function

Module and package

Oop using python

Chapter 3: Numpy

Chapter 4:pandas

Chapter 5: sklearn

Chapler 6:Matplotlib

Chapter 6:Data preprocessing

Data preparation

Feature Engineering

Data sets

Dimensionality reduction

Chapter 7 :Mathematical requirements

Linear algebra

Calculus

Probability and statistics

Eigen values and eigen vectors

Chapter 8: Regression

Linear regression

Logistic regression

Chapter 9: classification

K nearest Neighbors

Gaussian Naïve

Decision Tree classifier

Random Forest classifier

Support vector machine

Chapter 10: Unsupervised learning (clustering)

k means clustering.

Additional

- Deep learning
- tensorflow