



Prep Homework

- Python List
- Python Dictionary
- Pandas
- Numpy

Class 1

What is machine learning

How do machines learn

- Supervised
- Unsupervised
- Reinforcement
- Ensemble

What can machines learn

- Classification
- Regression
- Clustering
- Dimensionality reduction
- Neural Networks

Business problem as machine learning problems

Links

<https://scikit-learn.org/stable/tutorial/basic/tutorial.html>

https://en.wikipedia.org/wiki/Machine_learning

https://scikit-learn.org/stable/tutorial/machine_learning_map/index.html

Homework:

Prep data sets for classification

Class 2

Supervised learning - Deep Dive I

Classification

Lab : Spam detection

Links

https://www.analyticsvidhya.com/blog/2017/09/naive-bayes-explained/?utm_source=feed&utm_medium=search-dropdown



Class 3

Supervised learning - Deep Dive II

Regression

Lab : Regression model

<https://realpython.com/linear-regression-in-python/#problem-formulation>

<https://searchengineland.com/heres-how-i-used-python-to-build-a-regression-model-using-an-e-commerce-dataset-326493>

Data : <https://www.kaggle.com/iyadavvaibhav/ecommerce-customer-device-usage>

Class 4

Unsupervised learning - Deep Dive I

Clustering

Lab : Recommendation Engine

https://www.youtube.com/watch?v=Se28XHl2_xE

https://www.youtube.com/watch?v=-8BrRnFzq_Y

Class 5

Supervised learning - Deep Dive V

Neural Networks

Lab - TensorFlow - Image Classification

<https://blog.statsbot.co/neural-networks-for-beginners-d99f2235efca>

Class 6

Capstone project Demo

Capstone project list

<https://data-flair.training/blogs/machine-learning-project-ideas/>

<https://www.kdnuggets.com/2020/03/20-machine-learning-datasets-project-ideas.html>