Machine Learning Committee
Spring 2022 Plan
GitHub Campus Teams, AUC

The committee is planning to offer machine learning training to the enrolled members. All details of the training are outlined below.

Training Objective:

The aim of this training is to introduce the basic concepts of machine learning and enhance a hands-on experience on a real-life use-case using Python. The training is divided into two tracks, Track 1 which is an introductory-level track and for students with no background in machine learning and/or python programming. The second track is for students who have familiarity with Python, Statistics, Linear Algebra, and some introductory machine learning. The main concepts to be covered are Python programming, Linear Algebra review, Statistics review, Data science basics such as data visualization and extraction. Additionally, this training covers supervised and unsupervised machine learning including the most common algorithms in each of them.

A real life use-case will be given to work on in parallel with the training, and the participants will compete against each other to get the most accurate model for it.

Track Topics

1. Machine Learning with Python
    a. Pandas
    b. Numpy
    c. Matplotlib, seaborn
2. Statistics Review
    a. Distribution
    b. Naive Bayes
    c. Probability
3. Linear Algebra Review
4. Data Science
    a. Data Cleaning
    b. Visualization
    c. Features Engineering --- to some context
5. Introduction to Machine Learning
    a. K-NN
    b. Linear Regression
    c. Logistic Regression
    d. Clustering --to some context

Track Outline:

No	Session Topic	Date
1	Intro to Python (Numpy, Pandas, Matplotlib)	02/03/2022
2	Statistics and Linear Algebra review	09/03/2022
3	EDA, (Cleaning, Visualization, Correlation, Features Engineering)	TBA
4	Intro to Machine Learning (Motivation, K-NN, and Learning Types) and Linear Regression	TBA
5	Linear Regression Contd. and Logistic Regression	TBA
6	Logistic Regression and intro To Clustering	TBA

Done By

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