DATA SCIENCE SYLLABUS / 7 MONTHS

Python and Programming basics

- Data types
- Loops
- Control statements
- Python data collections
- Object-Oriented Programming

Python Libraries

- Numpy
- Scipy
- Matplotlib
- Seaborn
- Math, Random

Math

- Vectors and Matrices
- Probability and Statistic
- Calculus and optimization
- Hypothesis testing

SQL

- Relational databases
- Joins
- Subqueries
- GroupBy, Aggregate functions

Pandas

- Series and DataFrames
- Exploratory Data Analysis
- Data Preprocessing

Data Visualization

- Matplotlib
- Seaborn

Supervised Machine Learning

- Linear and Logistic Regression
- Hyperparameter tuning
- Supervised learning evaluation metrics
- Underfitting and overfitting problems
- KNN
- SVM
- Naïve Bayes
- Decision Trees
- Bagging
- Boosting
- Pycaret
- Recommender systems

Unsupervised Machine Learning

- Clustering (K-means, DBSCAN, Agglomerative)
- Dimensionality reduction
- Frequent pattern mining
- Anomaly detection

Deep Learning

- Artificial Neural Networks
- Convolutional Neural Networks
- Recurrent Neural networks
- Tensorflow
- Functional API

Additional topics

- Time series analysis
- Audio data
- NLP ve Computer vision Part1
- NLP ve Computer vision Part2
- NLP ve Computer vision Part3
- NLP ve Computer vision Part4