

# Emir Alaattin Yilmaz

Istanbul, Turkey

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github.com/alaattinyilmaz

## PERSONAL SUMMARY

Proactive learner Computer Scientist and Electronics Engineer. Easily adapts to new environments in a short time. Capable of combining wide range of technologies. Highly skilled in mathematics, programming, algorithms and researching.

## WORK EXPERIENCE

### Software Engineer

Sep 2021 – Present

StartupHeroes, Istanbul, Turkey

- Developed features for data pipelining system by use of JAVA framework Spring, Apache Kafka and workflow system Apache Airflow technologies for Migros a big supermarket chain company.
- Created REST API and microservice infrastructure by use of AWS, and Google Bigquery services.

### Teaching Assistant

Sep 2019 – Present

Sabancı University, Istanbul, Turkey

- Conducted recitations and organized the course materials.
- Algorithms Course
- Data Structures Course
- Database Systems Course

### Software Engineering Intern

Jun 2018 – Aug 2018

NETAS Telecommunications, Istanbul, Turkey

- Produced a R&D project on indoor positioning using Bluetooth beacon signals and machine learning techniques.
- Built an Android application to collect Bluetooth signal data.
- Developed Android app guiding the user to find a route based on machine learning techniques.
- Combined several technologies: Python (for algorithm performance testing of paper replicas), JavaScript (Node.js / Express.js as the server to collect data) and JAVA (Android).

### Software Engineering Intern

Turkish Aerospace Industry, Istanbul, Turkey

Mar 2018 – May 2018

- Built a test software and an inventory database system for automation processes by use of JAVA and MySQL.

### Workshop Moderator

Sabancı University, Istanbul, Turkey

Feb 2015 – Nov 2017

- Organized regular workshops (up to 100 people) to peer students as an academic development assistant for Calculus and Natural Sciences courses.

## EDUCATION

### Doctor of Philosophy, Computer Science and Engineering

Sep 2021 – Sep 2022

Sabancı University, Istanbul, Turkey, On Hold

### Master of Science, Computer Science and Engineering

Sep 2019 – Jun 2021

Sabancı University, Istanbul, Turkey, GPA: 3.71/4.00

### Bachelor of Science, Computer Science and Engineering

Sep 2014 – Jun 2019

Sabancı University, Istanbul, Turkey, GPA: 3.63/4.00

### Bachelor of Science, Electronics Engineering

Sep 2014 – Jun 2019

Sabancı University, Istanbul, Turkey, GPA: 3.63/4.00 – Double Major

### High School Diploma, Math and Science

Sep 2008 – Jun 2013

Huseyin Avni Sozen Anatolian High School, Istanbul, Turkey

## SKILLS

**Advanced:** Python, JAVA, C++, SQL, PHP, MATLAB, Android, HTML, CSS, MS Office

**Upper-Intermediate:** JavaScript, C#, C, UNIX/Linux, Verilog, Assembly, LaTeX

## **PUBLICATIONS**

- "Anomaly Detection in Surveillance Videos Using Regression With Recurrent Neural Networks" published in IEEE, *2022 30th Signal Processing and Communications Applications Conference (SIU)*, 2022

## **PROJECTS**

### **Recommendation System by Link Prediction Approach on Transactional Data**

- As a master thesis project, generated a recommendation system based on link prediction approach in graph structures.
- Combined graph representation algorithms with gradient boosting classifiers to use on a credit card transaction data for merchant prediction of a customer in the next month.

### **NFT Generator**

- Created an NFT generator program that takes input traits and combines and colorizes them randomly biased by rarity probabilities. Generated NFTs can be seen on: [multicybers.com](https://multicybers.com)

### **Automated Anomaly Detection from Security Camera Videos**

- Built an automated anomaly (such as robbery, explosion etc.) detection system from security camera videos as a research project.
- Combined CNN based feature extraction methods, auto-encoders and LSTM in my models applied on UCF-Crime anomaly detection dataset by use of Tensorflow/Keras frameworks.

### **Real-time Risk Game Software Development**

- Teamed up to implement a real-time board game engine that allows 2 to 6 people to play and generate multiple game rooms based on Node.JS, MongoDB technologies.

### **E-commerce System User Behavior Visualization Tool Development**

- Built a data visualization tool based on an e-commerce website data which allow user to apply various type of filters such as country, timeline and calendar view to have data insights.
- Performed data analysis in Python and used D3.JS for visualization purposes.

## **CERTIFICATIONS**

### **GRE General Test**

Quantitative: 166/170

Nov 2018 – Nov 2023

### **TOEFL IBT Test**

Score: 94

Nov 2018 – Nov 2020

## **AREA OF INTEREST**

Data Engineer, Python Developer, Java Developer, System Design, Mobile Developer, Full-Stack Developer, Mathematics, Data Scientist, Machine Learning, Signal Processing

## **HONORS AND AWARDS**

### **High Honor List**

At Dean's High Honor List in University

### **Nationwide University Entrance Exam**

Ranking in 0.3% among 2.3 million applicants