

# Emir Alaattin Yilmaz

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## 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

### Teaching Assistant

Sabanci University, Istanbul, Turkey

Sep 2019 – Present

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

### Software Engineering Intern

NETAS Telecommunications, Istanbul, Turkey

Jun 2018 – Aug 2018

- Produced a R&D project on indoor positioning which uses Bluetooth beacon signals and machine learning techniques.
- Built an Android application to collect Bluetooth signal data.
- Developed Android app that guides the user to find a route based on machine learning techniques.
- Combined several technologies to perform the project: Python (for algorithm performance testing of paper replicas), JavaScript (Node.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

Sabanci 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

### Master of Science, Computer Science and Engineering

Sabanci University, Istanbul, Turkey

Sep 2019 – Jun 2021

GPA: 3.71/4.00

### Bachelor of Science, Computer Science and Engineering

Sabanci University, Istanbul, Turkey

Sep 2014 – Jun 2019

GPA: 3.63/4.00

### Bachelor of Science, Electronics Engineering

Sabanci University, Istanbul, Turkey

Sep 2014 – Jun 2019

GPA: 3.63/4.00 – Double Major

## SKILLS

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

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

## 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.

### 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.

### Micro-Expression and Deception Detection in Motion Videos

- Researched and analyzed the nature of micro-expressions and the relation between micro-expressions and deception detection, constructed a CNN for micro-expression detection using CASME II dataset, implemented NB classifier for deception detection purpose.

## CERTIFICATIONS

### GRE General Test

Quantitative: 166 / 170

Nov 2018 – Nov 2023

### TOEFL IBT Test

Score: 94

Nov 2018 – Nov 2020

## AREA OF INTEREST

Python Developer, C++ Developer, Mobile Developer, Full-Stack Developer, Mathematics, Machine Learning, Deep Learning, Data Analysis, Natural Language Processing, Computer Vision, 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