

# Furkan K. Yildirim

COMPUTER SCIENCE & INDUSTRIAL ENGINEERING · JUNIOR STUDENT

Orta Mah. Üniversite Cd. Sabancı Üniversitesi, Tuzla/İstanbul

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## Education

### Double Major SABANCI UNIVERSITY

İstanbul, Turkey

B.S. IN COMPUTER SCIENCE & INDUSTRIAL ENGINEERING (DOUBLE MAJOR) - BUSINESS ANALYTICS (MINOR)

Sep. 2019 - Expected: Jun. 2024

- **Computer Science Featured Courses:** Data Structures & Algorithms, Software Engineering, Operating Systems, Database Systems, Network Systems, Mobile Application Development, Intr. to Data Analysis, Machine Learning, Logic & Digital System Design.
- **Industrial Engineering Featured Courses:** Operation Research, Simulations, Decision Economics, Information Systems.

## Skills

**Soft Skills** Communication, Teamwork, Leadership, Problem-solving, Attention to Detail

**Front-end** Flutter, React Native, HTML5, CSS

**Back-end** Flask, FastAPI, REST API, Firebase

**Programming** Python, C++, C#, JavaScript, Dart, SQL, Verilog, Rockwell Arena

**Other** Discrete Event Simulation, Vehicle Routing Problems, Mobile Application Development, Web Development, Agile Software Development, Object Oriented Programming, Web crawling, MySQL, PostgreSQL MongoDB, Redis, Git, Jira, Miro, Docker

**Languages** Turkish (Native), English (C1)

## Professional Experience

### Getir

İstanbul, Turkey

ALGORITHM DEVELOPER

Nov. 2022 - Present

- Participating in the development of Vehicle Routing Problem solving algorithms to assign orders to the couriers in the most efficient way by using Python, VROOM, OSRM and OSM in GetirMarket domain.
- Maintaining in the development of Discrete Event Simulation to optimizing test and runtime performances of the algorithms by using Python, FastAPI, Numpy and Pandas in GetirMarket domain.
- Working on visualizing data results from VROOM, OSRM and New Relic on the Getir Market platform using Python.

### Getir

İstanbul, Turkey

ALGORITHM DEVELOPER INTERN

Apr. 2022 - Nov. 2022

- Worked on optimization test and runtime performances of OSRM and VROOM results with Discrete Event Simulation on Getir Market platform using Python libraries FastAPI, Numpy and Pandas.
- Developed unit tests, developed integration tests and refactored codebases for micro-services of the Getir Market platform using Python.

### Sabancı University

İstanbul, Turkey

LEARNING & TEACHING ASSISTANT

Oct. 2021 - Jun. 2022

- Assisted Instructor Gülşen Demiröz on Data Structures Course, gave homework, graded, and helped students on assignments, also held weekly office hours.
- Assisted students with their Python learning through weekly recitation sessions in the Computational Approaching to Problem Solving Course.
- Under the supervision of Prof. İnanç Arın, extracted Turkish texts from PDF images using Python and certain APIs with Sabancı University Center of Excellence in Data Analytics.

### CRS Software

İstanbul, Turkey

SOFTWARE ENGINEER INTERN

Jan. 2022 - Feb. 2022

- Created and developed an e-commerce platform with .NET using C# language during the internship.

### Hyperlink Digital Library

İstanbul, Turkey

SOFTWARE ENGINEER

Jun. 2021 - Jan. 2022

- Developed a cross-platform mobile application of an e-Book Library with Flutter. Deployed at **Google Play Store** and **App Store** on January'22.
- Helped develop Semantic Search API in an e-Book Library with Python Flask, Redis and MySQL.

## Projects

### Delivery Route Optimization at E-Bebek Company

TEAM LEADER - ALGORITHM & BACK-END DEVELOPER

- Under the supervision of Prof. Dr. Bülent Çatay for graduation project, developing an algorithm that, deal with Vehicle Routing Problem (VRP) variant that matches orders with the delivery vehicles in E-Bebek Company and determines the vehicle routes, with Python.

## Voidture E-Commerce Platform

LEAD MOBILE APPLICATION DEVELOPER & BACK-END DEVELOPER

- Developed an e-commerce mobile application for Furniture using Flutter and led the mobile application team.
- Took part in the demo presentation of the application. Used Jira and Bitbucket to maintain the project.
- Worked on the service development part of the application using FastAPI, PostgreSQL, Redis and Docker.

## Analyzing Prerequisites of Courses of Sabancı University

ALGORITHM & BACK-END DEVELOPER

- Under the supervision of Prof. Dr. Hüsni Yenigün, developed an algorithm and a script with Python to collect and analyze the prerequisites of Sabancı University courses.
- Visualized the analyzed data using JavaScript and Python Flask. Published source code of the project on **GitHub** and deployed at **Heroku**.

## SUchedule Mobile Application

FULL-STACK DEVELOPER

- Developed a mobile application (SUchedule) with React Native, allowing Sabancı University students to create their schedules with a friendly user interface.
- Developed the back-end service of this application with Python Flask and published source code of backend service on **GitHub**.
- Published source code of the project on **GitHub** and deployed at **Google Play Store** and **App Store**. Reached 2000+ downloads.

## WakeGuard, Location Based Alarm Application

MOBILE APPLICATION DEVELOPER

- Created location tracking and alarm application with React Native and Firebase named WakeGuard and leading the project.
- Published source code of the project on **GitHub** and deployed at **Google Play Store** and **App Store**. Reached 1000+ downloads.

## Digital Business Card Mobile Application

FULL-STACK DEVELOPER

- Created, developed, operating, and deploying a stand-alone business card web and mobile application where users can keep and share all their social media accounts with Python Flask and React Native using QR Code and NFC technologies.

## FlixWatcher Database Project

WEB CRAWLING, DATABASE DEVELOPER

- Created a MySQL database of movies and TV shows that will be removed from Netflix in the near future and a linked website to process the database entries. Used Python Request and BeautifulSoup to gather movie and TV show data from some websites and led the project.

## Taxi Booking Mobile Application

MOBILE APPLICATION DEVELOPER & TEAM LEADER OF PROJECT

- Led the project for developing a taxi reservation application with React Native such as Uber and Bitaksi for Alo Crash Damage Assessment Solution Partnership and Consulting Services Company.

## Competitions & Honors

### COMPETITIONS

- |      |   |                    |
|------|---|--------------------|
| 2022 | <b>ITU ACM Algocomp'22</b> , Ranked 15th with my team among 300+ teams in the competition which is an algorithm-based coding competition.                                       | <i>Turkey-Wide</i> |
| 2021 | <b>Inzva Hackerspace</b> , Ranked 1st at Sabancı University and 9th on overall with my team among 200+ teams in the competition which is an algorithm-based coding competition. | <i>Turkey-Wide</i> |

### HONORS

- |      |  |                    |
|------|--|--------------------|
| 2022 | <b>Sakıp Sabancı %100 Encouragement Scholarship</b> , Awarded for academic achievement   | <i>Turkey-Wide</i> |
| 2022 | <b>Dean's High Honor List</b> , Achieving grade more than 3.5 over 4.0.  | <i>Turkey-Wide</i> |
| 2021 | <b>Dean's High Honor List</b> , Achieving grade more than 3.5 over 4.0.  | <i>Turkey-Wide</i> |
| 2019 | <b>High Success Scholarship</b> , Ranked 1365th among 1,500,000+ students (0.09 percentile) in National University Entrance Exam (YKS 2019). | <i>Turkey-Wide</i> |

## References

### Gülşen Demiröz

INSTRUCTOR AT SABANCI UNIVERSITY

- Faculty of Engineering and Natural Sciences - Sabancı University, FENS Building, Office L015
- **Phone:** +90 (532) 585 61 50
- **Email:** gulsen.demiroz@sabanciuniv.edu
- **Relationship:** I was her Teaching Assistant in the CS300 Data Structures Course she lectured.