ALI **BOLAT**

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Education

Ted University Sept 2021 – Feb 2026 (Expected)
Bachelor's Degree, Computer Engineering
• GPA: 3.15 / 4.00

Ted University Sept 2024 – Feb 2026 (Expected)
Minor Degree, Communication Systems
• GPA: NA

Professional Experience

Ted University
Ankara, Turkey

Team Lead at TAVP — Oct 2024 - Ongoing

- Contributed to the TEDU Autonomous Vehicle project by designing and implementing **deep reinforcement learning** (DRL) algorithms, including DQN, DDQN, and PPO, for autonomous navigation of a remote control (RC) car in dynamic environments using MetaDrive and Carla.
- Conducted research leading to the a paper titled "Deep Reinforcement Learning for Autonomous RC Car Navigation in Dynamic Environments," focusing on the comparative performance analysis of DRL algorithms.
- Optimized training processes through reward shaping techniques, enhancing the learning efficiency and adaptability of the DRL models in complex scenarios.
- Collaborated with a team to develop documentation, troubleshoot issues, and ensure project milestones were met while utilizing ROS2 for system integration.

Monolib
Ankara, Turkey

Intern at ARGE Department — Haziran 2024 - Ekim 2024

• Created comprehensive documentation for the application, including user guides and technical specifications, using Mkdocs. This involved researching and writing details about app features, input variables, and method functions.
• Helped to implement a secure password management feature and encryption of the data in the database, allowing users to set encryption pins. I studied various encryption algorithms, including symmetric and asymmetric encryption, as well as hash algorithms. I built a benchmarking app to evaluate the performance of these algorithms in terms of encryption and decryption speed.
• Independently designed and implemented a trip management feature using **AWS Amplify**. This included connecting the app to a cloud database, creating forms, and developing backend logic.

• Gained proficiency in writing integration and unit tests using **Flutter** testing libraries. I developed tests for both new features and existing code to ensure functionality and reliability.

Ted University
Ankara, Turkey

Academic Tutor Jan 2022 - Dec 2023

- Helped to 80 students on their lab assignments.

Personal Projects

Mobile & Web App: KeduApp see on Action, see on Github Sept 2023

- A simple note-taking app with a clean and minimalistic UI with an offline-first approach that saves nots to both local and cloud.
- A simple database design to store notes on the cloud with **Firebase**.
- For saving notes to local storage as objects **Isar** package used with **ORM** structure.
- For authentication, Firebase Authentication used.
- Used languages and frameworks: Dart, **Flutter**, **Provider**.

Desktop App: SteamClone see on Github Dec 2023

- A desktop app like Game store Steam that handles operation like buying games creating accounts and addFriend to other accounts etc.
- Designed Relation database on **SQLite**.
- Made database connection between the views and the server using **JDBC**.
- UI components built with **JavaFX** with several libraries.
- For dependency management **Maven** used and for Person object data stored as object in database with Hibernate.

Discord Bot: KauwelaBot see on Github , see on Discord Nov 2022

- Kauwela Bot is a multipurpose discord management and fun bot. It's written for personal use. It has AI features using GPT3 API and for photograph generation DALLE API
- Used languages and frameworks: for dependency management maven used and bot built with **JDA** framework and for music features, lavaplayer and several different libraries used for both youtube and local music files.
- Both has capability of taking HTTP request from different APIs for fun commands etc.

Mobile App: iyiKahve see on Action Ongoing

- İyiKahve is an app that allows users to find quality coffee and quality places, follow the beans and activities in coffee shops and discover new shops.
- The application is designed to help people find qualified coffee shops near them and to rate and share comments about the coffee shops they have visited before.
- Designed database in Postresql and auth in postresql and sql stuff,
- Made database connection between the views and the server.
- Integrated Google Maps Routes to the app for showing coffee shops on the map.
- Used languages and frameworks: Flutter, Riverpod, Firebase Firestore, Google Maps API, Firebase Authentication, and several flutter libraries.

Mobile App: GuvenliYuvam see on Github Jan 2024

- GuvenliYuvam is an app that calculates the possible earthquake risks of buildings, gives a score and provides various guides and advice to users based on this score. In this way, it helps society to prepare for possible earthquakes by increasing its sensitivity to earthquakes.

- It’s built for Google Solution challenge 2024. The languages and frameworks that are used while building the app are Flutter, Provider, Firebase Database, Google Maps API, Gemini Pro API, and Firebase Authentication. For the local database Hived used with **ORM** structure.
- For the Rest API’s we used **Flask** library in the pyhton, and we experimented with **Spring** framework for also rest API’s you can find here; API with Flask, API with Spring