

# EFE BALLAR

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## OBJECTIVE

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Senior CS student with project, teaching and internship experience, seeking part-time Software/ML engineering roles.

## EDUCATION

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**Bachelor of Computer Science**, Sabanci University

Expected 2025

Minor in Business Analytics

GPA: 3.83

Sabanci Encouragement Award, 2022 & 2023 & 2024: Full-tuition scholarship awarded for academic excellence.

Relevant Coursework: Data Structures & Algorithms, Software Engineering, Databases, and Artificial Intelligence.

## EXPERIENCE

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**Business Intelligence Engineer Intern**

Jul 2024 - Present

Amazon

*Istanbul, Turkey*

- Developed automated data pipelines for the Finance team using ETL tools, enabling improved decision-making.
- Achieved 20% reduction in query execution times by optimizing crucial SQL queries for faster data retrieval.
- Automated financial dashboards and reports in Quicksight and Excel, reducing manual reporting time by 50%.

**Undergraduate Assistant**

Oct 2023 - Jun 2024

Sabanci University

*Istanbul, Turkey*

- Assisted over 1000 students in IF100 & CS201 courses by holding office hours for assignments in Python/C++.
- Led two-hour weekly recitation sessions on programming fundamentals.

## PROJECTS

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**LLM-based Course Assistant.** Designing and implementing an LLM-based Course Assistant for Sabanci University to support students. Developing a retrieval-augmented generation model in Python for students to ask questions on lecture materials. Creating a web application with React and Flask as frameworks, and NoSQL database to ensure accessibility.

**Database for Turkish Election Trends.** Researched and scraped over 80 years of historical election data from Turkey, transforming it into a suitable format. Utilized Python libraries for web scraping, extracting information from the official Turkish Electoral Board website. Conducted preliminary trend analysis and created data visualizations of past elections using Python and Excel.

**Analysis of Turkey's Grand Assembly History.** Collected insightful data of the distribution of MPs throughout the years, by scraping the official website of the Grand Assembly of Turkey using Python's BeautifulSoup and Selenium libraries. Developed a ML model with Scikit-learn to predict next terms and created visualizations using Matplotlib.

**Study Buddy App.** Facilitated student collaboration by developing a user-friendly Android application with several key features, including course selection/filtering, study session creation, and comment posting on sessions. Backend implemented in Java, used MongoDB as database, and experienced with Docker.

**Flight Roster Project.** Developed a web-based system that can prepare flight rosters for an airline's flights. Used NodeJS to implement APIs, utilized MySQL and MongoDB for scalable data storage and retrieval.

## SKILLS

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**Programming Languages**

Python, R, Java, Assembly, C, C++, JavaScript, HTML, CSS, MySQL

**Technologies/Frameworks**

Pandas, Langchain, Scikit-learn, Selenium, Spring, MongoDB, Docker, Git, AWS