Ece Çağlar Undergraduate Student

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Profile

An engineering undergraduate with hands-on experience in C#, SQL, Python, HTML, and CSS, gained through various academic projects, both collaborative and individual. I have a good grasp of database design and responsive web development. My interest lies in Artificial Intelligence and Data Science. I'm keen to enhance my technical skills, contribute to challenging projects, and continuously develop essential soft skills like teamwork, problem-solving, and communication.

Skills

Languages

English

- Yükseköğretim Kurumları Yabancı Dil Sınavı (YÖKDİL)
  Report Issue Date: 06.03.2025 Score: 70,00

Software Skills

- **Programming Languages:** Python, C#, C++
- **Web Technologies:** HTML, CSS, JavaScript, ASP.NET MVC, Bootstrap
- **Databases:** Microsoft SQL Server
- **Frameworks:** ASP.NET MVC
- **Tools & Platforms:** Microsoft Office Suite, Power BI

Education

09/2022 Sakarya University – Sakarya, Turkey
Bachelor of Engineering: Information Systems Engineering 3rd Grade

3.60 GPA

Projects

AI-Powered Sign Language Recognition System for Hearing-Impaired Patients in Emergency Departments

TÜBİTAK 2209-A Üniversite Öğrencileri Araştırma Projeleri Destekleme Programı- [TÜBİTAK-Funded Project (Ongoing)] | April 2025 – Present

Supervisor: Dr. Öğr. Üyesi Burcu ÇARKLI YAVUZ

Project Summary: Developing an AI-powered Turkish Sign Language (TİD) recognition system to reduce communication barriers for hearing-impaired individuals in emergency departments, aiming for accurate and rapid transmission of vital health information.

Technologies: MediaPipe and YOLOv11 integration for real-time hand, face, and body detection, and precise sign localization within video frames. LSTM models for analyzing sequential movement data. Large Language Models (LLM) for converting translated signs into meaningful medical text.

Data Mining Project

Group Academic Project | Data Mining Course, 2025

Description: Applied classification algorithms to a large dataset collected collectively from Hepsiemlak.com, focusing on specific decision columns chosen by our group. The project involved cleaning and preprocessing a dataset with over 1000 samples and 135 features, then analyzing it using various data mining algorithms. We developed and compared at least five distinct algorithms to build the most effective predictive model, enhancing performance through feature engineering and optimization strategies.

Technologies: Python libraries

Data Visualization

Individual Academic Project | Data Visualization Course, 2025

Description: Developed a comprehensive Power BI dashboard for advanced data visualization, transforming raw data into actionable insights. The project involved end-to-end data preparation (transformations, modeling, relationships) and creating interactive dashboards with diverse chart types.

Technologies: Power BI, PostgreSQL

Autonomous Vehicle Simulation with Basic AI System Development

Group Academic Project | Introduction to Artificial Intelligence Course, 2024

Description: Collaborated in a 20-member group to design and develop a decision-making mechanism for an autonomous vehicle, applying AI algorithms to a real-world problem within a simulation environment. The system enabled the vehicle to navigate a predefined city map, avoid obstacles, reach a target, and determine efficient routes. We implemented various path-finding algorithms, including optimal, simple, and heuristic-based solutions, and developed rule-based decision-making for real-time adaptation to dynamic conditions such

as traffic signals and obstacles. The project also focused on optimizing routes based on obstacle detection and traffic factors.

Technologies: Python, Unity

Pediatric Department Duty Scheduling Web Application

Individual Academic Project | Web Programming Course, 2024

Description: Developed a web-based application to manage and display duty schedules for 15 pediatric residents across "Child Emergency," "Child Intensive Care," and "Child Hematology and Oncology" departments.

Technologies: ASP.NET MVC, HTML, CSS, JavaScript, SQL Server Management Studio (Database Design)

Interactive E-commerce Website Design

Individual Academic Project | Web Technologies Course, 2023

Description: Designed and developed an interactive and responsive e-commerce website, featuring a unique front-end design.

Technologies: HTML, CSS, Flexbox, Bootstrap, JavaScript

3-Level Escape Game Development

Individual Academic Project | Object-Oriented Programming (OOP) Course, 2023

Description: Developed a multi-level escape game using Object-Oriented Programming principles, where a player-controlled avatar navigates through three distinct levels to complete the game.

Technologies: C#, Object-Oriented Programming (OOP) Principles

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Dynamic Matrix Operations and Encryption

Individual Academic Project | Introduction to Programming Course, 2022

Description: Developed a C++ program to generate and manipulate 5x5 matrices with random elements (0-10).

Technologies: C++

Order Planning and Distribution System

Individual Academic Project | Introduction to Programming Course, 2022

Description: Designed and implemented a C++ program simulating a firm's product distribution from a 1000-unit warehouse to 10 dealers with varying product demands (0-100 units).

Technologies: C++