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| RESEARCH INTERESTS | I study multi-agent coordination and fair decision-making through formal methods and algorithmic design. My research applies logic-based reasoning, constraint programming, and optimization to develop explainable and equitable intelligent systems. I aim to bridge symbolic knowledge representation with learning frameworks to create AI systems that are interpretable, fair, and human-compatible. | | |
| EDUCATION | Sabancı University | Istanbul, Turkey | |
| | B.S. in Computer Science and Engineering, B.S. in Industrial Engineering Minor in Mathematics, Minor in Business Analytics | | Expected June 2026 |
| | <ul style="list-style-type: none">• GPA: 3.97/4.00, Dean List: High Honor• Highest GPA in Industrial Engineering, Top 5 in Computer Science and Engineering• Full Tuition Scholarship | | |
| | Uppsala University (Erasmus Exchange) | Uppsala, Sweden | |
| | Computer Science and Mathematics | Jan 2024 - June 2024 | |
| RESEARCH EXPERIENCE | CON-NET: Platform-Agnostic Bot Detection Model | | |
| | TUBITAK & CHIST-ERA funded project Supervisor: Dr. Onur Varol | | Jan 2025 - Present |
| | <ul style="list-style-type: none">• Designing and implementing a platform-agnostic bot detection model• Implementing account-based and digital-dna based VAE models• Feature engineering for cross-platform compatibility and implementation of novel approaches to avoid distribution shifts• Co-authoring paper for submission to ACM Web Conference 2026, Special Track on Web4Good | | |
| | Partial Observable Multi-Agent Path Finding with Constrained Communication | | |
| | Erasmus Internship, University of Luxembourg Supervisors: Prof. Leon van der Torre & Dr. Pere Pardo Ventura | | July - Sep 2025 |
| | <ul style="list-style-type: none">• Designed a framework to solve a novel variant of the Multi-Agent Path Finding (MAPF) problem featuring partial observability, decentralization, and anonymous task-sequential requirements with constrained communication• Modeled observation and communication using dynamic epistemic logic and employed Answer Set Programming for collaborative planning under uncertainty• Developed a simulation script to compare performance across different exploration strategies and map configurations• Currently preparing a manuscript for publication | | |
| | Solving Matching Problems Using AI Methods | | |
| | PURE Project, Sabancı University , Supervisor: Prof. Esra Erdem | | Sep 2024 - Jan 2025 |
| | <ul style="list-style-type: none">• Designed a student-to-department assignment system using Gale-Shapley algorithm and Constraint Programming to balance student preferences, diversity goals, and department capacities | | |
| | Automatic Transcription of Ottoman Documents (AKIS) | | |
| | TUBITAK funded project, Sabancı University Supervisors: Prof. Berrin Yanıkoglu & Dr. Esma Bilgin Tasdemir | | Aug 2023 - Jan 2024 |
| | <ul style="list-style-type: none">• Enhanced image segmentation capabilities of existing R-CNN model and achieved significant improvement in model accuracy for document transcription | | |
| | A Digital Analysis of an Early Ottoman Chronicle | | |
| | PURE Project, Sabancı University Supervisors: Dr. İnanç Arın & Dr. Mehmet Kuru | | July - Sep 2023 |
| | <ul style="list-style-type: none">• Created geo-visualizations and interactive data analyses of Asıkpasazade's Chronicle | | |

- Performed NLP analyses with BERT and BERTopic to explore sentiment and themes
- Developed an LLM-based chatbot using GPT-3.5 to enable dynamic user interaction with the chronicle

Legotize: 3D to LEGO Converter

INDUSTRY EXPERIENCE

Valensas Software, Supervisor: Akın Idil

Aug - Sep 2024

- Designed a program to convert 3D models into pixelated LEGO representations using PyTorch3D.

Vinventory: Inventory Management App

Valensas Software, Supervisor: Moray Baruh

July - Sep 2024

- Built an inventory management app using Go, React.js, and PostgreSQL with Azure AD authentication. Integrated CI/CD pipelines with GoReleaser and deployed on Kubernetes with Helm Charts.
- The app is currently being used as a tool inside the company.

OREDATA Data Science Intern | Istanbul, Turkey

Jan 2023 - Feb 2023

- Experimented with and compared different tumor-detection ML and DL models using scikit-learn. Practiced exploratory data analysis leveraging Kaggle datasets.

TEACHING EXPERIENCE

Teaching Assistant: Algorithms (Prof. Esra Erdem, Jan 2025 - present); Machine Learning (Dr. Onur Varol, Sep 2024 - Jan 2025); Data Structures (Dr. Gülsen Demiröz, Sep 2023 - Jan 2024).

AWARDS AND HONORS

- **Ranked 139th** among 2,416,974 students (**884th in STEM category**) in Turkey's national university entrance exam 2021
- **Full Tuition Scholarship** and Monthly Stipend, Sabanci University 2021
- **TUBITAK 1001 Undergraduate Scholarship**, Research Trainee on a TUBITAK-funded project with monthly stipend Aug 2023 – Jan 2024
- **Highest GPA**, Industrial Engineering Department, Sabanci University 2025
- **Top 5 GPA**, Computer Science and Engineering Department, Sabanci University 2025

SKILLS

Languages: Turkish (Native), English (IELTS: 8.0/9.0), German (Basic)

Programming: Python, C/C++, Go, JavaScript, Java, Verilog

ML/AI: PyTorch, TensorFlow, Keras, scikit-learn, OpenCV, NetworkX, Matplotlib, Seaborn, PyTorch3D

Tools & Infrastructure: Git, Docker, Kubernetes, Flask, MERN Stack, Unix/Linux CLI, L^AT_EX, Markdown

Databases: PostgreSQL, MySQL, NoSQL

EXTRA- CURRICULAR ACTIVITIES

Google Developer Student Club: Led workshops on TensorFlow, Selenium and Git/GitHub for 2-3 hours each.

Literature Club: Board member of the Literature Club of Sabancı University for 4 years, the last year as the President. For the last 3 years, I was the coeditor of the club's semiannual literature fanzine, "harmoni."

Social Responsibility: Volunteered in shoreline cleanups, Gender and Memory Walks, and botanic garden projects.