Hamit Efe Çinar

Research Interests

I study multi-agent coordination and fair decision-making through formal methods and algorithmic design. Through my research, I explore 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

- 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: Prof. Onur Varol Jan 2025 - Present

- 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 the paper planned to be submitted 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

- 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

- 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

- 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. Inanç Arın & Dr. Mehmet Kuru July - Sep 2023

- 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

Industry Experience

Legotize: 3D to LEGO Converter
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 virtual inventory 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 (Prof. 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, LaTeX, 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.