

SEMIH CAĞLAR

📍 Ankara, Türkiye

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🎓 Scholar

EDUCATION

Vrije Universiteit Amsterdam

Exchange Student

Feb 2027 – Jun 2027

Amsterdam, Netherlands

Bilkent University

B.Sc. in Computer Science (Full Scholarship)

Sep 2023 – Expected Jun 2028

Ankara, Türkiye

- **GPA: 3.96/4.00**
- **Ranked 1st** out of 169 students in the department
- Minor degree in **Psychology**

EXPERIENCE

Founding Engineer

Hansel

Sep 2026 – Present

Ankara, Türkiye

- Designing and implementing **indoor mapping, route generation, and delivery verification algorithms** that transform courier movement data into continuously updated building maps and precise indoor routes.
- Conducting **investor outreach** and contributing to **fundraising and business development**.

Research Intern

SWAT Lab, Polytechnique Montréal

Jun 2026 – Sep 2026

Montréal, Canada

- Conducted research under the supervision of [Prof. Foutse Khomh](#) on **agent personalization**.

Undergraduate Researcher

Bilsen - Bilkent Software Engineering Research Group

Jan 2025 – Present

Ankara, Türkiye

- Conducting research with [Prof. Eray Tuzun](#) in **developer productivity** and automated software engineering.
- Co-authored **2 conference papers** and **2 workshop papers** in top venues.
- Built and deployed **SmellSolver** — a GitHub/Azure DevOps PR bot (**Python, Flask, SQLite**) that detects and repairs inline comment smells, monitoring over **50 Azure Repos** at **Beko**.
- Reviewed **several papers** in top venues.

Robotics Software Engineer Intern

Kuartis

Jun 2025 – Aug 2025

Ankara, Türkiye

- Built a ROS2 path-planning module that combines **Hybrid A*** algorithm with an Artificial Potential Field (**APF**) post-optimizer to generate non-holonomic paths for autonomous surface vessels.
- Implemented the constrained APF optimizer in modern **C++** with **NLopt**, enforcing collision-free corridor and curvature constraints.
- Validated the system in 1 km² simulated maritime environments, achieving 20 m path precision with optimization completing in 1 second per run.

Machine Learning Engineer

IDA AI

Apr 2024 – Sep 2024

Remote

- Developed and deployed machine learning algorithms for innovative fashion tech solutions, including **text2image garment design** and **virtual try-on**.
- Contributed to [ModaMind](#)'s fashion design application and infrastructure using **Google Cloud, Firebase, Docker, and Kubernetes**.

PUBLICATIONS

- K. K. Dikici, S. Kara, **S. Çağlar**, E. Tüzün, and S. Sav. "SERSEM: Selective Entropy-Weighted Scoring for Membership Inference in Code Language Models." *FSE/AIware 2026 Poisoned Chalice Competition*, **1st Place**, 2026. [doi:10.1145/3803437.3807734](https://doi.org/10.1145/3803437.3807734).
- **S. Çağlar**, Ş. E. Gökırmak, and E. Tüzün. "Automated Classification of Human Code Review Comments with Large Language Models." *EASE 2026 (CORE A)*, 2026. [arXiv:2604.23667](https://arxiv.org/abs/2604.23667).
- H. K. Çağlar, **S. Çağlar**, and E. Tüzün. "Automated Inline Comment Smell Detection and Repair with Large Language Models." *IEEE/ACM ASE 2025 (CORE A*)*, pp. 1008–1019. [doi:10.1109/ASE63991.2025.00088](https://doi.org/10.1109/ASE63991.2025.00088).
- V. Karakaya*, **S. Çağlar***, Y. Y. Korkmaz*, and E. Tüzün. "ATIBA: Grounded Integrity and Quality Checking for Research Papers." *International Workshop on Automated Techniques for Integrity and Quality in Software Engineering Research (ATIQSER 26)*, 2026. [doi:10.1145/3844135.3845865](https://doi.org/10.1145/3844135.3845865).

AWARDS & ACTIVITIES

Social Relations Coordinator – ACM Bilkent Student Chapter	2025 – Present
Honorable Mention – ICPC Southeastern Europe Regional Contest (Bucharest, Romania)	2024
Valedictorian – Ankara Science High School	2023
Bronze Medal – National Olympiads in Informatics	2022, 2023
Official Participant – Asia-Pacific Informatics Olympiad	2022

PROJECTS

- Deep Review (Academic paper review management system) | *Next.js, Express, TypeScript, TypeORM, SQLite*
- Designed and implemented an **LLM-powered review assistant** featuring **AI-generated reviews, PDF annotation, empirical checklist generation, compliance analysis, and reference verification.**
 - Built **AI backend services** and integrated **LLM-powered review workflows** into paper management and **multi-round peer review pipelines.**
- SplitMate (Expense sharing desktop app) | *JavaFX, Java Spring Boot, MongoDB*
- Led a team of **5 people** and owned the backend, designing Spring Boot services, defining MongoDB schemas for users, groups, transactions, debts, and integrating the desktop UI with backend APIs.
 - Built the **automatic debt settlement** pipeline using **Python 3** and **PuLP** for integer linear programming.