

# TANKUT KAYRA ÖZERK

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## PROFESSIONAL SUMMARY

Computer Science & Engineering graduate from Sabancı University with a strong foundation in full-stack development, industrial automation, and data-driven systems. Experienced in HMI software development, machine interface integration, and industrial automation protocols through hands-on professional work. Proven record of shipping scalable web applications, leading cross-functional engineering teams, and applying Agile/Kanban methodologies. Seeking to apply deep technical expertise in C++, Python, and Node.js to complex software challenges in industrial and enterprise environments.

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## WORK EXPERIENCE

### Computer Engineer · Misura Technology

January 2026 – Present

Industrial Automation · HMI Software Development · Software Integration

- ▶ Contributing to the development and configuration of Human-Machine Interface (HMI) modules for industrial systems, leveraging CODESYS Fundamental training to design intuitive operator dashboards and monitoring interfaces.
- ▶ Assisting in the integration of industrial hardware with software layers, focusing on establishing reliable data connectivity between PLCs and high-level applications.
- ▶ Engineered an AI-powered accounting automation system using n8n and AI Agents to streamline receipt processing and data extraction, reducing manual data entry and human error.

### Software Engineering Intern · CyberQuote

July 2024 – August 2024

- ▶ Boosted social media content workflow efficiency by designing and deploying a full-stack Social Media Editor Web Application, using Node.js (server-side) and Pug.js (frontend).
- ▶ Improved data pipeline throughput by integrating Apache Kafka and Cassandra DB
- ▶ Reduced backend processing bottlenecks by architecting RESTful API endpoints and optimizing database query patterns, cutting average API response time

### Software Engineering Intern (Remote) · KoçSistem

July 2023 – November 2023

- ▶ Accelerated cross-service communication for the SmarTravel platform by designing and implementing a Node.js communication module.
- ▶ Improved team delivery cadence by adopting Agile and Kanban methodologies, contributing to sprint planning and daily stand-ups that kept the project on track across a fully remote team.

### Learning Assistant – MATH 202 · Sabancı University

February 2025 – June 2025

- ▶ Enhanced student exam performance by leading weekly recitation sessions for 30+ undergraduates in Differential Equations (MATH 202), resulting in a measurable improvement in class-average mid-term scores.
  - ▶ Streamlined problem-solving sessions by preparing structured solution guides for instructor-assigned practice sets, reducing average time-to-understanding for complex ODE topics.
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## PROJECTS

### Teaching Awards Web Application (Graduation Project) · Sabancı University *September 2024 – June 2025*

- ▶ Delivered a university-wide faculty recognition platform currently used by 6,000+ Sabancı University students and staff, built with PHP and MySQL, improving the efficiency of teaching award nominations.
- ▶ Reduced manual administrative overhead by designing an automated nomination workflow, eliminating paper-based processes and enabling real-time status tracking for all university stakeholders.

### MyPet – IoT Smart Pet Collar Startup · *June 2023 – October 2024*

- ▶ Secured a competitive TÜBİTAK BiGG program grant by building a production-ready IoT platform tracking pet vitals and movement, validating the product's technical feasibility to a national research council panel.
- ▶ Scaled data reliability by architecting a SQL-based relational database and REST APIs in Node.js, supporting real-time ingestion of sensor events from multiple concurrent collar devices.

### Flight Roster Management System · *February 2024 – June 2024*

- ▶ Led a cross-functional engineering team of 10 to deliver a full-stack pilot management system on time and within scope, applying Agile sprint planning and weekly milestone reviews to keep delivery on track.
- ▶ Designing optimized API endpoints for pilot scheduling data using Node.js, backed by AWS RDS (SQL) for structured queries and MongoDB (NoSQL) for flexible document storage.

### Undergraduate Research Project (PURE) · Sabancı University *Sept 2024 – January 2025*

- ▶ Co-authored an academic essay on cognitive load and information management strategies "Expect More, Remember Less" by analyzing EEG datasets from 30 participants, contributing insights published as part of an interdisciplinary research project in the Faculty of Arts & Social Sciences.

### Study Time Manager – Mobile App · *October 2023 – January 2024*

- ▶ Increased students' self-reported study efficiency by building a cross-platform Android mobile app using Java, Spring Boot, Android Studio, and MongoDB, integrating real-time session tracking and automated reminder logic.

### Collaborative Analysis of Turkish Industry Performance · *February 2023 – June 2023*

- ▶ Delivered strategic sector insights to a 8-person research team by building Excel pivot-table models analyzing performance across all Turkish industries against global macroeconomic indicators.

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## EDUCATION

### B.Sc. Computer Science & Engineering · Sabancı University *September 2021 – June 2025*

Faculty of Engineering and Natural Sciences | Istanbul, Turkey

İstek Bilge Kağan High School *September 2017 – June 2021*

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## TECHNICAL SKILLS

**Advanced:** C/C++, Python, Java, JavaScript, Node.js,

**Intermediate:** Assembly, PHP, React, SQL / NoSQL (MySQL, MongoDB, Cassandra), Apache Kafka, Spring Boot

**Familiar with:** AWS, Docker, Git, Bootstrap, MIPS Architecture, Agile / Kanban, CI/CD, HMI Development, Industrial Automation, CODESYS, Modbus, Workflow Automations

**Languages:** Turkish (Native), English (Advanced), German (Beginner)

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## CERTIFICATIONS & ACTIVITIES

- ▶ Sabancı University PURE Research Certificate – "Expect More Remember Less" (2024–2025)
- ▶ Sabancı University Sailing Club – 2★ Advanced Sailor (2023–2024)
- ▶ Sabancı University Sailing Club – 1★ Beginner Sailor (2023–2024)
- ▶ Yeditepe University Semi-Open Debate Tournament – Finalist (2022)
- ▶ Sabancı University Civic Involvement Project – Animal Shelter & Coastal Cleaning (2021–2022)
- ▶ İstek Bilge Kaçan Debate Club – President (2019–2020)