Yagmur Duman

M.Sc. Informatics · Software/Product Engineer

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Summary

Product-minded and customer-oriented Software Engineer experienced in building and owning production applications end to end, from user needs and system design to deployment. Skilled in TypeScript, React, Python, and .NET, with experience in collaborating across cross functional teams, and translating complex business requirements into reliable software solutions.

Skills

Programming	TypeScript, JavaScript, Python, C#, Java, C++, Go, SQL
Front-end	React, Next.js, Vue.js, Zustand, Redux, Tailwind CSS, Material UI, Ant Design, Bootstrap, HTML/CSS, SVG, Canvas
Back-end	.NET, FastAPI, Spring Boot, Node.js, NestJS, Express, REST APIs
Cloud & DevOps	Azure, AWS, Docker, Terraform, CI/CD, Datadog, ArgoCD, Git, Ubuntu
Databases	PostgreSQL, MongoDB, MySQL
Tools & Libraries	TensorFlow, Pandas, Playwright, Postman, Claude Code, Codex
Languages	English (C2), German (B1), French (A2), Turkish (Native)

Experience

Enpal

Berlin, Germany

Software Engineer II — *Oct. 2026 - Present*

- Conducted product discovery to unify solar system design workflows into a single platform, analyzing user needs, identifying process gaps, and defining requirements for future development.
- Developed features for the solar system design platform using React, TypeScript, and C#/.NET.
- Collaborated with stakeholders, designers, and engineers to evaluate technical approaches, contribute to architectural decisions, and shape the platform's evolution.

Software Engineer — *May 2025 - Sep. 2026*

- Led the end-to-end development of a solar panel planning application, from technical design and implementation to production deployment, adopted across thousands of planning cases.
- Developed an interactive roof planning editor using React, TypeScript, Canvas, and SVG, utilizing computer vision techniques and geometric transformations for accurate solar panel placement on aerial imagery.
- Designed and implemented backend services with C#/.NET, defining API contracts and migrating business logic into backend components.
- Reduced average planning time by approximately 6 minutes per case and increased planned panel capacity through workflow automation and UX improvements.
- Improved production reliability through distributed tracing, metrics, and monitoring using Datadog and OpenTelemetry.
- Communicated progress and technical tradeoffs to stakeholders through weekly demos and status reviews, contributing to roadmap planning and delivery.

Knauf Digital

Munich, Germany

Working Student Software Engineer — *Sept. 2024 - March 2025*

- Developed and maintained an internal order-tracking platform, using React, Next.js, TypeScript, and Node.js/NestJS.
- Built UI components and application workflows for an MVP asset data management tool, collaborating closely with UI/UX designers.
- Supported cloud infrastructure and deployment processes using Azure.

Celonis

Munich, Germany

Working Student Software Engineer — *Sept. 2022 - Aug. 2024*

- Optimized query execution and improved reliability of the Celonis Process Query Language (PQL) engine using modern C++ (C++20/23) and Java, implementing performance improvements and automated tests.
- Developed a monitoring tool for an in-house distributed C++ compilation system (homcc) using Python and Qt, improving visibility into compilation processes. This project later became an open-source project.

Yapi Kredi Teknoloji

Istanbul, Turkey

Assistant Software Engineer — *July 2021 - Feb. 2022*

- Full-stack web development using Java, Spring Boot Framework, React.js, Oracle Database and microservice architecture in an agile team.

Education

Technical University of Munich
Munich, Germany

M.Sc. in Informatics
April 2022 - January 2025

- Focus Area: Engineering Software-Intensive Systems
- Overall Grade: 2.0 (German system); Thesis Grade: 1.3
- Master's Thesis: Proactive Human Interfaces for Intelligent Process Automation

Sabanci University
Istanbul, Turkey

B.Sc. in Computer Science and Engineering
Sept. 2017 - June 2021

- 75% Tuition Scholarship
- Grade: 3.29/4.0 (US system); Thesis Grade: 3.9/4.0
- Bachelor's Thesis: Detecting Cyber Attacks Based on High-Interaction Website Honeypot

Projects

Praktikum: Cloud Databases
Munich, Germany

M.Sc. in Informatics - TUM
Apr. 2023 - Aug. 2023

- Created a distributed and persistent key-value store that is also replicated using Java and socket programming.
- Added features such as binary search and sharding to boost the performance of the database and added encryption when sending data to improve the security throughout the database.

Interdisciplinary Project: Alterscope
Munich, Germany

M.Sc. in Informatics - TUM
Sept. 2022 - Apr. 2023

- Developed a tool for real-time monitoring of blockchain activity using Javascript, Golang, React.js, Typescript and Amazon QLDB.
- Learned about web3 technologies.

Manage-it Project Management Platform
Munich, Germany

M.Sc. in Informatics - TUM
Apr. 2022 - Aug. 2022

- Created a web application directed at project managers with features, such as task tracking, scheduling and reporting, a project analysis dashboard and a booking page to book personal assistance sessions with experienced business analysts.
- Carried out the process from the business idea pitch to both UX and architectural design to implementation throughout the Software Engineering for Business Applications (SEBA) course.
- Used the MERN stack (MongoDB, Express.js, React.js, Node.js) for the implementation.

B.Sc. Thesis: Detecting Cyber Attacks Based on High-Interaction Website Honeypot
Istanbul, Turkey

B.Sc. in Computer Science and Engineering - Sabanci University
Sept. 2020 - June 2021

- A tool to automate honeypot website creation was implemented. Honeypot website templates consisted of blog and news websites and were created using PHP with various intentional vulnerabilities such as SQL Injection and XSS to lure attackers.
- The content of the template websites were generated by scraping and summarizing daily news, through the use of NLP techniques, mainly transformers, GPT2 Large Language Model (LLM), was used to generate texts.
- Websites created with this tool were deployed into Docker VM and the network traffic was monitored with tshark. Shell scripts were written in order to automate the deployment of the honeypots. Integration of several VMs were completed in order to parse the pcap files in main server.

Activities

Women in CS@TUM
Munich, Germany

Member
Apr. 2022 - Aug 2022

- Actively participated in events, workshops, and networking sessions focused on empowering women in computer science, gaining insights into industry trends and career development.
- Collaborated with club members to promote diversity and inclusion, contributing to a supportive community for female students in tech.

High School English Debate Club
Istanbul, Turkey

Member
Sep. 2015 - June 2017

- Engaged in competitive debates, developing skills in public speaking, critical thinking, teamwork and structured argumentation.
- Participated in International Worlds Schools Debate Tournament in Ljutomer, Slovenia.