

UMMU GULSUM ERGIN

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## Professional Summary

Full-stack software engineer with a strong foundation in backend and frontend development, user experience design, and usability engineering. Skilled in building scalable, secure, and accessible applications. Experienced in collaborative, agile environments delivering production-ready solutions with a focus on performance optimization, debugging, and continuous improvement.

## Technical Skills

Languages: Python, Java OOP, JavaScript, TypeScript, HTML5, CSS, React

Frameworks & Tools: Spring Boot, Flask, Thymeleaf, Bootstrap, REST API, Git, Figma, Miro, Google Colab

Hardware & Prototyping: Arduino, Digital Fabrication, Laser Cutting, Blender 3D

Data & Analysis: NumPy, Pandas, Data Visualization

Methodologies: Scrum, Agile

Other: Prompt Engineering, Data Visualization, ISO Standard Compliance, Accessibility Design, Usability Testing

Languages: Turkish (native), English (fluent), German (beginner), Korean (beginner)

## Education

**Rhein-Waal University of Applied Sciences**, Kamp-Lintfort, Germany

MSc, Usability Engineering, GPA: 1.8 — Expected 2026

Relevant Coursework: Human-Computer Interaction, UX Project Management, ISO Standards, Accessibility, User Experience Design

**Bahcesehir University**, Istanbul, Türkiye

BSc, Software Engineering, GPA: 3.4 — June 2024

Thesis: Ergonomic Risk Assessment Web Application with Java Spring, integrating ISO standards

Relevant Coursework: Data Structures & Algorithms, Database Management Systems, Software Architecture, Software Security, Software Verification & Validation, Object-Oriented Programming, Data Science with Python, Software Project Management

## Professional Experience

**Freelance UX & Full-Stack Developer** — Remote, Germany | 2024 – Present

- Delivered full-stack and UI/UX solutions for client projects, including web apps, digital invitations, and interactive prototypes.
- Integrated stakeholder feedback in agile sprints, improving user satisfaction and usability scores.
- Managed deployment processes, ensuring accessibility and security compliance.

**Search Quality Improvement Specialist – Data Annotator** | Kovan App — Remote, Türkiye | Jul – Sep 2024

- Evaluated and annotated data to train AI models, ensuring accuracy and relevance.
- Collaborated with engineering teams to enhance model performance and user experience.

**Front-End Web Developer** | Pointo — Remote, Ankara | Jul – Aug 2023

- Built responsive websites with HTML5, CSS, JavaScript, and REST API integration.
- Applied UI/UX best practices to improve navigation and reduce bounce rates.

**Projects**

**Kui Bot: Museum Chatbot** | Rhein-Waal University Usability Lab, Germany (2024–2025)

- Designed and developed an AI-powered, multimodal chatbot to enhance museum engagement, with a Python backend, SQLite database, and a frontend built using HTML and CSS, incorporating prompt engineering techniques.
- Conducted usability testing (UEQ, MES) with 12 participants, improving story comprehension rates.
- Applied accessibility best practices for inclusive interaction design.

**Ergonomic Risk Assessment Web Application** | Bahcesehir University, Türkiye (2023–2024)

- Developed a responsive Spring Boot web application that automated NIOSH RWL calculations and generated PDF reports using iTextPDF, with a frontend built using Thymeleaf, Bootstrap, and JavaScript.
- Reduced task completion time from 100+ seconds to <5 seconds in usability tests (>80% completion rate).
- Implemented secure data handling and followed ISO ergonomic assessment standards.

**Leadership & Activities**

- Board Member & Social Media Contributor, Photography Club — Istanbul (2023–2024)
- Volunteer, Yesilay — Raising awareness for addiction prevention (2023–2024)
- Broadcaster, Bahcesehir University Radio Club (2019)