

ASUMAN SENOL KAR

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SUMMARY

I am a results-oriented Software Engineer and Applied AI Engineer with a Master's in Cyber Security and a Ph.D. in Web Security and Data Privacy. I combine strong research depth with hands-on delivery, contributing across the full software lifecycle: stakeholder collaboration, business and requirements analysis, user story definition, development, testing, and documentation. My recent work focuses on AI/LLM-powered systems alongside backend and cloud engineering. I am proficient in Python, JavaScript, TypeScript, Node.js, C#, SQL, and cloud platforms.

EXPERIENCE

Freelance Software Engineer & AI Consultant

ENGIE • Brussels/Belgium • Dec'24 - Present

- Designed and implemented solutions in C# .Net and Python to meet performance, robustness, and scalability requirements
- Designed and implemented an agentic AI assistant platform using Python, LangGraph, and Chainlit to support engineering and operational workflows.
- Built modular MCP server integrations (GitHub, PostgreSQL, Grafana) to enable tool-augmented, context-aware LLM interactions.
- Implemented prompt orchestration, tracing, and evaluation workflows to improve response quality, reliability, and observability.
- Containerized the solution with Docker and environment-based configuration for reproducible deployment and scalability.

Skills and Tools: Python, Generative AI, AI Agents, Prompt Engineering, REST APIs, PostgreSQL, Docker, GitHub, Grafana, Azure DevOps

Senior Software Engineer

Here Technologies • Brussels/Belgium • Jul'24 - Dec'24

- Automated Privacy Management: Developed RESTful APIs to streamline privacy compliance, enhancing efficiency for privacy specialists and product teams.
- Privacy by Design: Integrated privacy principles into the product development lifecycle, automating compliance tasks and aligning with Product Trust initiatives.

Skills and Tools: Python, TypeScript, JavaScript, Flask, AWS, RESTful APIs.

Student Researcher

Google LLC. • Zurich/Switzerland • Jan'23 - May'23

- Contributed to the [Privacy Budget](#) project
- Analyzed legitimate uses of browser fingerprinting
- Trained a machine learning model to detect authentication pages, facilitating the study of browser fingerprinting attempts on these pages

Skills and Tools: Python · TypeScript · JavaScript · Go · Data Privacy · Browser Fingerprinting

Application Development Engineer

Roketsan Missiles Inc. • Ankara/Turkey • Apr'17 - Apr'20

- Developed web applications using ASP.NET MVC with agile methodologies
- Created mobile applications using React Native
- Designed and deployed Web APIs on MS Azure
- Enhanced existing projects with new features and issue resolutions

Skills and Tools: ASP.NET MVC · Entity Framework · Python · Oracle Database · C# · React Native · Git · Hangfire · PL/SQL · Microsoft SQL Server · API Development · ASP.NET Web API · Azure

Software Engineer

ONUR YÜKSEK TEKNOLOJİ A.S. • Ankara/Turkey • Jan'16 - Apr'17

- Worked as a front-end developer on a Voice Communication System project using JavaScript
- Developed a desktop application using JavaFX as a full-stack engineer

Skills and Tools: MySQL · JavaScript · JavaFX · Jira · Git

Software Engineer

ICTERRA A.S. • Ankara/Turkey • Feb'15 - Jan'16

- Developed a full-stack internal ERP project using Java and AngularJS

Skills and Tools: MySQL · JAVA Spring · AngularJS · Play Framework

EDUCATION

Doctor of Philosophy - Ph.D., Web Privacy

KU LEUVEN - Leuven/BELGIUM • Apr'20 - May'24

- Conducted empirical research on online privacy violations
- Proposed novel approaches, such as browser extensions, to address privacy concerns
- Collaborated with legal teams to understand regulatory frameworks such as GDPR and CCPA
- Automated Privacy Management: Developed an automation tool to enhance efficiency for privacy specialists and product teams
- Privacy by Design: Integrated privacy principles into the product development lifecycle, automating compliance tasks and aligning with Product Trust initiatives

Master of Science - MS, Cyber Security

METU - Ankara/Turkey • Sep'15 - Jun'17

- Gained expertise in secure software development, penetration testing, network security, cryptography, and legal aspects

Bachelor of Science - BS, Mathematics

METU - Ankara/Turkey • Sep'10 - Jun'15

AWARDS

1. [2022 CNIL-Inria Award for Privacy Protection](#)

PUBLICATIONS

1. **WWW'24** - [The Double-Edged Sword: Identifying Authentication Pages and their Fingerprinting Behavior](#)
2. **S&P'24** - [Targeted and Troublesome: Tracking and Advertising on Children's Websites](#)
3. **WPES'23** - [Unveiling the Impact of User-Agent Reduction and Client Hints: A Measurement Study](#)
4. **USENIX'22** - [Leaky Forms: A Study of Email and Password Exfiltration Before Form Submission](#),
5. **Master Thesis, 2017**- [Improved differential attacks on Rectangle](#)
6. **ISCTurkey'17** - [Differential Attacks on Lightweight Block Ciphers PRESENT, PRIDE and RECTANGLE Revisited](#)