

ALPAY YILDIRAY

Senior Software Engineer | Lead Developer | Microservices |
Distributed Systems | Software & DevSecOps Architect

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📍 Bremen, Germany

🌐 alpay-yildiray



PROFILE

Software Engineer focused on modern, scalable software architecture. Extensive experience developing distributed systems based on C#/.NET and microservices in high-critical environments. Strong focus on maintainability, system design and sustainable software quality.

- Specialisation in robust, scalable software architectures
- Experience in enterprise and high-assurance environments
- Focus on Clean Architecture, design patterns and system design
- Strong at analysing complex technical systems and requirements

PROFESSIONAL EXPERIENCE

Software Engineer (Full-time)

Rheinmetall - F&E Software & Technologie

📅 Aug 2025 – Present

📍 Bremen

- Design of system architecture and implementation of software platforms in high-security environments
- Ownership of core service components and architectural decisions
- Alignment of system design and interfaces - often across multiple teams
- Improvement of code quality, software architecture and vulnerability analysis
- Integration of DevSecOps into the development process

Software Developer (Working Student)

Rheinmetall - F&E Software & Technologie

📅 Jun 2019 – Jul 2025

📍 Bremen

- Development of distributed microservice systems
- Containerisation and setup of development environments with Docker
- Continuous development of CI/CD pipelines
- Contribution to infrastructure and low-level system components
- Involvement in architectural decisions

Software Developer (Working Student)

Sensosurf GmbH

📅 Jul 2017 – Jul 2018

📍 Bremen

- Development of software-based sensor systems
- Integration of IoT solutions into mechanical components

SKILLS



CERTIFICATES

- Certified Professional for Software Architecture (ISQI/ISAQB-CPSA-F)
- Microsoft Certified: Azure Fundamentals (AZ-900)
- Cambridge Certificate of Proficiency in English (C2)

LANGUAGES

German
English
Turkish
Latin



EDUCATION

M.Sc. Computer Science (Grade 1.5)

University of Bremen

📅 Oct 2022 – Aug 2025

Master's thesis: "Distributing Non-Deterministic Simulation Processes in a Computing Cluster using Event Sourcing and Containerization" (Grade 1.0)

B.Sc. Computer Science (Grade 1.6)

University of Bremen

📅 Oct 2017 – Sep 2022

Bachelor's thesis: "Unifying Access to Distributed Data by Containerized Agent Cluster and Event Streaming" (Grade 1.7)

General University Entrance Qualification (Abitur) (Grade 1.7)

Ökumenisches Gymnasium Bremen

📅 Sep 2014 – Jul 2017

Academic Tutor (Practical Computer Science I & II)

University of Bremen

📅 Oct 2018 – Sep 2019

📍 Bremen

- Mentoring students in programming and computer science fundamentals
 - Fostering structured and clean software development
 - Supporting hands-on exercises and assignments
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System Integration & Digitalisation

Freelance / Projects

📅 Jul 2018 – May 2019

📍 Bremen

- Digitalisation of small organisations and IT infrastructures
- Development of secure and maintainable system architectures
- Consulting on software and infrastructure design

Board of Education High School Diploma

Onsted High School, Michigan (USA)

📅 Sep 2013 – Jun 2014

Lower & Middle School (no diploma)

Ökumenisches Gymnasium Bremen

📅 Sep 2008 – Aug 2013

FOCUS AREAS

- Designing and building modern software architectures and development environments for teams working with AI-assisted workflows
- Building scalable information systems
- Developing distributed system architectures
- High focus on clean code and sustainable software quality
- Working in high-critical / secure system environments

ADDITIONAL / PERSONAL

- Private homelab / home server
- Electrical engineering as a hobby (microcontrollers, etc.)
- I enjoy repairing cars and motorcycles
- Multiple awards in the "Jugend forscht" youth science competition (ages 12-17):
 - Several 1st & 2nd place awards at regional and state level
 - Special award from the Federal Minister of Defence at national level for the project "Implementing a Pattern Matching Neural Network on an Atmel Microcontroller"