



MATTANJA KERN

SOFTWARE ARCHITECT, DEVELOPER & TEAM LEAD

PERSONAL DATA



07 / 1982 (Stuttgart)



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German (native), English (C1)

ENTERPRISE WEB APPLICATION EXPERT

- Over 15 years of experience in professional software development
- Project experience at ASPION, LBBW, EnBW, Börse Stuttgart, TRUMPF and Daimler Financial Services, among others
- Successful project implementation from the beginning to the long-term operating phase in well over 15 projects
- Fullstack software developer with deep technical understanding of the entire stack

SKILLS

SOFTWARE DEVELOPMENT

.NET & .NET Core C#, Angular, Angular Material, CSS, Hangfire, API-Design, Database-Layout, SQL, KI, RAG, MCP-Server, Git, Clean Code

OPERATIONS

Kubernetes (Setup & Deployment), Backup-Management, Security, DSGVO, Linux-Server Administration, Terraform, Flux CI/CD

PROJECT MANAGEMENT & TEAM LEADERSHIP

Tech Lead, Scrum, Servant leadership & Team development, Requirements engineering

DEGREE AND CERTIFICATES

2009 Diploma in Software-Engineering, University of Stuttgart

2019 iSAQB Certified Professional for Software Architecture

2021 ISAQB Advanced REQ4ARC, Requirements for Software Architects

OVERVIEW

CURRENT POSITION

since April 2022 *kern.services software UG* – Software consulting and development on a self-employed basis (freelancer)

PREVIOUS POSITIONS

2002 – 2022 *Side business – software development, web hosting, IT services* Software development, creation of small websites, hosting services, operation of various web and mail servers, TYPO3, WordPress

2019 – today *rrcenter UG – Association management software* Co-founding of a UG for the distribution of software developed with several colleagues for association administration, person management, event planning, communication and member accounting, developed in PHP

2019 – 2022 *GFT Technologies SE – Software Architect and Team Leader* Software Development in Customer Projects

2015 – 2019 *AXOOM GmbH – Software developer, lead developer and team leader* Founding member of a TRUMPF startup, development of an IoT platform and IoT applications in mechanical engineering

2008 – 2015 *webix solutions GmbH – Software developer and lead developer* First working student, then software developer, later lead developer with project responsibility in service projects

2005 – 2008 *Daimler Financial Services AG / Daimler Chrysler Bank* Working student in the development of software for credit checks

PROJECT EXPERIENCE

CURRENT PROJECTS (2022 - PRESENT)

ASPION (09/2023 - PRESENT)

Interim Team Leader, Software Architect and Lead Developer

Led a team of 4 developers in the architecture and implementation to connect sensors to an IoT cloud platform to manage over 10,000 transport sensors, Successful go-live of the first version after 4 months of development, continuous expansions since then, implementation of automated deployment processes, architecture of a modular monolith for over 30 enterprise customers

Key technical achievement: Successfully integrate a legacy system with an external IoT platform by implementing a robust Hangfire job-based architecture, effectively decoupling external system failures from internal processes, and ensuring system reliability

Technologien: Angular, Cumulocity, .NET Core/C#, Hangfire, Docker, PostgreSQL, Blazor, Unit-Testing, Moq, Jasmine

Reference contact: Martina Wöhr, martina.woehr@aspion.de, +49 721 85149122

ENBW (08/2022 - 12/2023)

Software Architect and Lead Developer

Development of a platform for the management of plants for electricity generation from renewable energies

Key technical achievements:

- Architecture and implementation of a cloud-native system for calculating wind turbine yield losses, integrating multiple IoT data sources via Azure Functions and messaging systems
- Optimize front-end grid performance by implementing RxJS pipe-based data management techniques such as caching, buffering, and background preloading, reducing load times from >10 seconds to <500ms while fully retaining sorting and filtering capabilities
- Identify and fix a critical performance issue in an Azure Function where an exception in a loop resulted in 5-minute execution times; after optimization, the function was completed in 2 seconds

Technologien: Azure, Azure Functions, App Services, Azure Databases, Application Insights, .NET Core/C#, xUnit, Angular, Storybook, Cypress, KendoUI, NX, Kubernetes, PostgreSQL, MSSQL, Entity Framework

Reference contact: Alexander Dörner, a.doerner@enbw.com, +49 721 6324151

DEBTVISION (12/2020 - 10/2022)

Freelance Software Architect and Lead Developer

First as an employed team leader on behalf of GFT, then (from April 2022) as a freelance developer: architecture and development of a platform for the brokerage of promissory note transactions, lead developer of a second development team with a focus on supporting microservices, member of the core architecture team responsible for the management of system dependencies, specification and distribution of the team workload, technical architecture and design, implementation of Microservices, Messaging System Integration, Security, and Identity Management

Key technical achievement: Architecture and implementation of a comprehensive notification system, including: real-time notifications via WebSocket, chat communication system, email notification service, PDF generation service, integration with the core promissory note processing system

Technologien: Angular, Kubernetes, Spring Boot, Kotlin, PostgreSQL, ActiveMQ Artemis, Karma/Jasmine Testing, Keycloak

Reference contact: Jacob Hadra, +49 151 52218394

PREVIOUS PROJECTS & EMPLOYERS

VOLKSWAGEN FINANCIAL SERVICES (07/2019 - 11/2020)

Lead-Developer

Development of several projects to apply for vehicle financing - **technologies:** React Frontend, NestJS Services, Cypress Tests, AWS Lambda, ECS, Fargate, DynamoDB, API Gateway, CloudWatch, IAM, S3

AXOOM GMBH (04/2015 - 06/2019)

Software Developer, Lead Developer, Software Architect, Team Leader

Development of an Industry IoT platform (TRUMPF spin-off) - **Main responsibilities:** - Portal for integration of partner applications - Multi-tenant identity server with automated setup - App store and automated installation based on Kubernetes - Platform monitoring with Prometheus and Grafana - Developer documentation and partner support - **Technologies:** .NET Core/C#, Angular, Kubernetes, Kubernetes Operators, IdentityServer, OAuth2, Google Cloud, GKE, PostgreSQL, Grav, SignalR, Bootstrap CSS

WEBIX SOLUTIONS GMBH (11/2009 – 03/2015)

Software Development, Lead Developer

I started at webix solutions GmbH as a working student and then worked as a software developer and lead developer. During this time, I was responsible for the following projects:

Börse Stuttgart - Order Management Application - Development of a Trading Platform for Securities - Implementation of Order Management and Booking Functions - High-Performance Processing of Real-Time Price Data - **Technologies:** C# .NET, WPF, WCF, MSSQL, Entity Framework, Proprietary Client/Server Framework

Börse Stuttgart – Logging & Monitoring Frontend – Development of a frontend system for system monitoring, implementation of logging functionalities **Technologies:** C# .NET, WPF, MSSQL, Entity Framework, proprietary client/server framework

Börse Stuttgart – GEORGE - Near-time quotes and order processing, High-Performance **Technologies:** Oracle, MSSQL, Triggers, PL/SQL, Stored Procedures

DGNB - System Software for Building Certification - Further Development of a Software for Building Certification - International Cooperation with Philippine Development Team - **Technologies :** C#, .NET, ASP.NET MVC, Silverlight, MSSQL, Bootstrap CSS

DGNB – Navigator for Certified Products – Development of Cataloging Software **Technologies :** C#, ASP.NET MVC, MSSQL

DOSB (German Olympic Sports Confederation) - Development of an XML import system for exam data - **Technologies:** ASP.NET, C#, XmlDataSource, Entity-Framework

TechProtect Backbone – Development of a workflow management system for marketing services, implementation of several registration portals – **technologies:** C# .NET, WinForms, ASP.NET MVC, jQuery, Telerik Controls, proprietary ORM, web services, Scrum & CI

KNOWLEDGE & SKILLS

FRONTEND DEVELOPMENT

- **Angular, TypeScript, JavaScript, React**
- HTML, CSS, SCSS, Bootstrap, Tailwind
- Blazor

BACKEND DEVELOPMENT

- **.NET Core, C#, ASP.NET**
- Supabase
- Web Services, SignalR, WPF, WCF
- NestJS, TypeScript
- Spring Boot, Kotlin

CLOUD & DEVOPS

- **Docker, Kubernetes, Helm**
- CI/CD (Bitbucket, Gitlab, Github)
- Terraform, Infrastructure as Code
- Cloud Platforms (Microsoft Azure, AWS, Google Cloud)
- 20 years of experience in Linux server administration
- Container-Management und Kubernetes-Cluster-Administration
- Cloud-native (container orchestration, microservices architectures, event-driven design, serverless computing)

KI & GENERATIVE SYSTEM

- **Retrieval-Augmented Generation (RAG)**
- MCP-Server implementation
- Integration of AI into existing systems
- Optimizing AI models for production environments

SECURITY & IDENTITY

- **OAuth2/OpenID Connect**
- Identity Server, Keycloak
- Security Best Practices

DATABASES & DATA MANAGEMENT

- **Data Modeling, Database Design**
- ORMs (Entity Framework, Hibernate)
- Supabase, MSSQL, MySQL, Oracle, PostgreSQL
- Data Processing & Analytics

ARCHITECTURE

- Clean Architecture
- Domain-Driven Design
- Event-Driven Architectures, Messaging, Kafka
- Microservices Architecture

TESTING & QUALITY ASSURANCE

- **Automated Testing**
- Testing mit xUnit, NUnit, Cypress, Karma, Jasmine
- Mocking Frameworks: Moq, Mockito
- Test-Driven Development

PROJECT MANAGEMENT & METHODS

- **Scrum, Agile**
- Requirements Engineering
- Team Leadership
- Mentoring and development of junior developers

FURTHER KNOWLEDGE

- Linux Server Administration
- Windows Server & Exchange
- Git, GitHub Flow
- Business Process Management
- Web Services (SOAP, WSDL, XSD)

INDUSTRY EXPERTISE

- IoT & Industrial Automation
- Energy & Renewable Resources
- Financial Services & Banking

DEVELOPMENT ENVIRONMENTS & TOOLS

- JetBrains Products (Rider, WebStorm, DataGrip)
- Visual Studio
- Visual Studio Code
- AI development tools (cursor, copilot)

PROFESSIONAL DEVELOPMENT

- Regular participation in technical conferences and workshops
- Continuous learning
- Mentoring of junior developers & active knowledge transfer in the team