



Manuel Waltschek

Senior Software Developer

Contact

+43 676 429 06 90

manuel.waltschek@gmail.com

Vienna, Austria

manuelwaltschek.github.io

About Me

I'm a full-stack web developer with a strong focus on resilient, best-practice solutions. My background spans e-mobility applications, GIS, and domain-driven design, and I thrive on improving developer productivity while building innovative software from concept to launch. I value clean, maintainable code and a collaborative, holistic approach to delivering impactful products.

Expertise

- **Architecting** scalable systems with DDD & Bounded Contexts
- **Designing** secure, high-performance APIs and optimizing data flows
- **Building** robust backend services with a focus on maintainability
- **Driving** technical improvements and cross-team collaboration
- **Understanding** backend and frontend technologies supporting a holistic approach to web development
- **Aligning** engineering solutions with business goals & AI strategy

Education

- **Bachelor of Science in Traffic and Environment**
FH Technikum Wien 2015 - 2018
Acquired strong foundations in web and Android development for mobility and GIS solutions. Completed a Bachelor thesis on a mobility data collection and analysis tool (Mobimeter), integrating R and PostGIS for exploratory data analysis. Gained additional skills in IT security, business & management, and teleinformatics systems design.
- **Higher School Certificate**
BHAK Wien 11 2008 - 2013
Specialized in Logistics, with a strong focus on Business Studies and Business Informatics. Led the investment department in a practice firm simulation and developed a business plan for an imaginary enterprise

Experience

- **Full-Stack Software Developer**
SMATRICS GmbH & Co KG 2020 - Present
Led multiple projects simultaneously—in some cases as the sole developer collaborating with a Product Owner (PO), and in others as part of a small team (1-2 additional developers).

Built greenfield applications in the e-mobility domain, digitizing internal processes from sales to commissioning of charging stations. Launched a major solution for fulfillment workflows, initially for EnBW.

Developed and maintained a suite of back-end services, including an API for managing location and asset data and an integration with Jira Service Management. Also created Node.js-based Tool for API and MongoDB data migrations and an Angular library/design system to streamline development across multiple front-end teams.

Introduced structured design documents and advocated for domain-driven design practices. Continually helped to improve Agile processes, working in both Kanban and Scrum-like settings, collaborating with cross-functional teams, DevOps engineers, and POs. Contributed to the companies AI strategy by suggesting tools and initiatives.
- **Junior Java Web Developer**
PRISMA solutions 2017- 2020
Worked in a cross-functional team of up to 10 developers, testers, and GIS specialists using agile methodologies and Atlassian tools, contributing to data-centric applications and client apps in the traffic and e-government domain (including the Mobimeter® module for mobility data analysis). Introduced prototyping and pair programming with senior mentors, refactored a large legacy codebase to reduce compile times by a factor of ten, and integrated Java-based services with R servers for automated analytics. Collaborated closely with a Dutch mobile-app partner to align back-end services with front-end requirements, earning strong positive feedback from senior developers for stabilizing the architecture, improving maintainability, and significantly boosting productivity.

Tools

Programming Languages

- Java (primary),
- JavaScript, TypeScript,
- PHP (basic)
- C (basic for microcontrollers)

Frameworks & Libraries

- Spring Boot (microservices)
- Angular (front end)
- Node.js (CLI scripts)

Databases

- MongoDB (advanced)
- MariaDB/MySQL (basic)
- PostgreSQL & PostGIS (basic)

Cloud & Containers

- AWS (SNS, SQS, EC2, etc.)
- Docker, Kubernetes

Dev Tools & CI/CD

- Git, Maven
- Atlassian suite (Jira, Confluence, Bitbucket)
- API Tools, Postman, OpenAPI

Operating Systems

- Windows
- macOS
- some Linux usage

AI Tools

- ChatGPT
- GitHub Copilot
- Atlassian AI
- Grammarly

Soft Skills

**Analytical problem-solving and
evidence-based decision-making**

Collaboration & communication:

Regular pairing, mentoring / onboarding, and cross-team coordination

Adaptability & self-learning: Rapidly picked up new frameworks (MongoDB, Angular, AWS)

Leadership & initiative: Led projects solo, introduced best practices, improved developer productivity

Hobbies

- Biking, Hiking & Skiing: Enjoy outdoor activities for relaxation and physical challenge.
- Gaming & Board Games: Passion for strategic thinking and social interaction.

Projects

dFFS (Digitale Fulfillment Strecke)

- Greenfield application digitizing fulfillment processes (sales to commissioning of charging stations)
- Built with Spring Boot, MongoDB, MariaDB, Angular, and deployed on Kubernetes/Azure

API-Module

- Middleware connecting multiple SMATRICS modules, providing public endpoints and standardized protocols (e.g., OCPI)
- Streamlined system integration for various partners

CPO Asset Service & Jira Service Management Adapter

- Centralized service for managing location and asset data via RESTful API, distributing data to multiple clients via AWS SNS/SQS fan-out patterns
- Developed JSMA as a client of CAS to integrate asset data with Jira Service Management Assets

JavaScript-Based Tools & Libraries

- Created Node.js scripts for API and MongoDB data migrations
- Developed an Angular library/design system to standardize front-end experiences across multiple teams

Traff-X® & Mobimeter®

- Researched and developed a system for gathering and analyzing mobility data
- Employed R and PostGIS for exploratory data analysis and interactive visualizations
- Implemented APIs and domain modules for GIS applications, including an automated mobility-data analysis module (Mobimeter®)
- Integrated a Java service with an R server for advanced data visualization and statistics

SKAT Maßnahmenassistent

- Server and client development for e-government software focused on traffic and mobility
- Contributed to both back-end logic and user-facing components

GIP (Graph Integration Platform)

- Developed an application managing graph-like data structures and networks for traffic-related services

Java-Based Traffic Simulation

- Modeled graph-like networks and path-finding algorithms to simulate traffic flow
- Focused on object-oriented design and efficient data structures

Traffic-Jam App

- Created an Android application capturing sensor/GPS data, paired with a LAMP-stack back end for real-time analytics
- Developed an API to detect and visualize traffic events