Dirk Rottmar

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Surat Thani, Thailand
Available via B2B Contract (Estonian OÜ)
Fully Remote · SGT/APAC aligned (UTC+7)

Software Architect for AI Systems

iSAQB® Certified Professional for Software Architecture

PROFILE

Software architect with 25+ years of experience in the Java ecosystem. I design and implement deterministic, production-ready AI systems — seamlessly augmenting existing enterprise core systems with highly secure, scalable AI layers. Specialised in agentic architectures using Spring AI, MCP, and RAG, with a track record of delivering LLM-powered systems into high-stakes production environments in the DACH region. A recent example: a food manufacturer's monthly sales and forecast analysis used to take about one person-day of Excel work – it now runs automatically at the push of a button, including an analysis in plain language.

Based in Surat Thani, Thailand (ICT, UTC+7) — strong overlap with APAC working hours. Fully remote via B2B contract through my Estonian OÜ — no visa sponsorship or work permit required. Availability upon request.

AI & AGENTIC ARCHITECTURE

Forecast Analysis System · Alpenhain Käsespezialitäten GmbH

2025 – 2026

Designed and delivered an agentic AI system for automated forecast quality analysis across Key Account Management. The system processes production and planning data from multiple sources via MCP, runs LLM-driven analysis (Claude Sonnet), and generates weighted forecast quality scores per sales representative, customer, and article — including trend analysis and concrete, actionable recommendations.

- **MCP as deterministic data layer:** production and forecast data exposed as structured tools — no RAG, by design (exact numerical data requires deterministic access, not similarity search).
- **Phase 1 delivered:** per-representative forecast quality reports with article-level breakdown, deviation analysis, and prioritised action items.
- **Phase 2 blueprinted and handed over for production:** executive summary layer for management reporting.
- Both phases fully documented and production-ready — immediately available for similar engagements.
- Fully automated, scheduled report generation — zero manual intervention.

Tech: Java · Spring AI · Model Context Protocol (MCP) · Claude Sonnet (Anthropic) · Spring Boot

Atrify / Syndigo — AI-assisted Product Data Pipeline · Alpenhain Käsespezialitäten GmbH

2026

Automated transfer of product data into the GDSN standard (Atrify/Syndigo). Instead of manually maintaining a GDSN Excel sheet with around 1,100 columns, a pipeline maps the data via AI-assisted field mapping (Claude); every assignment is deliberately approved by the client through a review queue (human-in-the-loop). Hours of manual data maintenance become an automated, traceable run.

Tech: Java 21 · Spring Boot · Spring Data JPA · Flyway · PostgreSQL · Python 3.12 · Anthropic Claude · Docker · SFTP

Core AI Capabilities

- **Autonomous agent architecture:** multi-agent systems with tool use, memory, and structured output.
- **Spring AI & LangChain4j:** production LLM integration in Java enterprise environments.
- **MCP:** exposing existing Spring Boot services as LLM-accessible tools without restructuring core architecture.
- **RAG:** semantic knowledge retrieval via Pgvector, Chroma, Weaviate.
- **Local LLM operations:** Ollama / LM Studio for data-sovereign, on-premise AI deployment.
- Every agent call traceable, auditable, and deterministic — an architectural requirement, not an afterthought.
- **Nous Research Hermes:** advanced function calling, multi-agent orchestration, MCP server integration, and local deployment.

PROFESSIONAL EXPERIENCE

Principal Software Engineer The.NextGen GmbH · 08.2022 – 05.2026

Atruvia / GiroAPI Plus · Volksbanken Raiffeisenbanken (cooperative banks) 10.2025 – 03.2026

End-to-end development and QA of a banking API through to production rollout. Full ownership of the development lifecycle on Java/Spring Boot, deployment across multiple stages (ETU, ITU, SATU), and Kubernetes configuration within an OpenShift environment.

Tech: Java · Spring Boot · Mockito · JUnit · Jenkins · GitLab · Oracle · OpenShift · Kubernetes · Docker

Agentic AI Platform Development · The.NextGen GmbH 01.2026 – 03.2026

Core stack development for agentic AI integration in enterprise Java environments — directly applying the same architecture used in production client deployments.

- **AI Agents & MCP:** design and development of autonomous agents with standardised tool and data source integration.
- **Spring AI orchestration:** LLM workflow implementation in Java enterprise environments.
- **RAG:** intelligent assistant systems via Chroma and Weaviate vector databases.
- **Local LLM operations:** Ollama setup and optimisation for data-sovereign AI strategies.

Tech: Java · Spring AI · Model Context Protocol (MCP) · LangChain4j · Chroma · Weaviate · Ollama

Finanz Informatik GmbH & Co. KG · Sparkassen (savings banks) 07.2023 – 09.2025

Lead development of two Spring Boot / React applications (AnimO — implicit options analysis; CFGK — cash flow generator) deployed across Sparkassen-Finanzgruppe branches. Full lifecycle ownership: conception, development, deployment, change management, and team mentoring. Additional responsibility for Pentaho ETL adapters in daily and monthly batch processing.

Tech: Java · Jakarta EE · React · TypeScript · Material UI · Jenkins · DB2 · Oracle · Pentaho PDI · IntelliJ

Kaut-Bullinger GmbH & Co. KG — ETL Data Migration 09.2022 – 06.2023

Independent planning and execution of a data warehouse migration: analysis of Oracle and PostgreSQL schemas, migration and refactoring of Pentaho ETL jobs and transformations for MSSQLServer, automated test cases.

Tech: Java · Perl · Unix Bash · SQL · Oracle · PostgreSQL · MSSQLServer · Pentaho PDI

Senior Software Consultant IT Frankfurt GmbH · 04.2019 – 07.2022

Commerzbank AG — Cross Channel Banking 04.2020 – 07.2022

Development and maintenance of the commerzbank.de web portal. Lead developer responsible for code reviews, modularisation of monolithic architecture, and cross-cutting features (login, TAN authentication, authorisation) for a unified online banking platform serving retail and corporate clients.

Tech: Java EE · Spring Framework · Spring Security · Hibernate · REST · Wicket · React · Keycloak · Oracle

Amadeus GmbH — Framework Prototype Development 09.2019 – 04.2020

Lead role in evaluation, architecture, and prototype development for a Java backend migration at Europe's leading travel booking software provider. Eclipse Microprofile prototypes as integration showcases, REST interface implementation, JPA layer design, and Angular/Redux frontend development.

Tech: Java · Jakarta EE · Eclipse Microprofiles · Quarkus · JPA · Payara · Maven · Docker · OpenShift · Angular

Commerzbank AG — Core OnePerson 04.2019 – 09.2019

DB2 to Oracle Exadata migration, business layer and data access layer migration, new feature implementation. Lead developer and technical contact for junior developers.

Tech: Java · Spring · Hibernate · Oracle · Maven · Jenkins

Managing Director / Lead Developer / Software Architect Medianet GmbH Frankfurt · 02.1998 – 04.2019

21 years leading software architecture and development across diverse enterprise clients including Siemens, Fresenius AG, Hoffmann-La Roche AG, Philips AG, and Sybase Inc. Selected projects:

DLG e.V. — Extranet Exhibition & Innovation Management 2018 – 2019

Architecture, development, and maintenance of an exhibitor communication platform for the Agritechnica and Eurotier trade fairs. CRM and content management integration, REST APIs, Angular frontend.

Tech: Spring MVC · Angular 2.0 · Hibernate · Oracle · MySQL · Tomcat · TypeScript · JUnit

iOS & Android App Development — Agritechnica, Eurotier, Feldtage 2013 – 2018

Design and development of 11 iOS and Android trade fair companion apps over five years. Spring MVC backend for data synchronisation, Angular/Ionic frontend, Apple App Store and Google Play Store release management.

Tech: Spring MVC · Angular · Ionic · MongoDB · MySQL · Apache Solr · XCode · TypeScript

TECH STACK

Agentic AI & LLM Infrastructure

Spring AI	Model Context Protocol (MCP)
LangChain4j	Retrieval-Augmented Generation (RAG)
Multi-Agent Systems	Pgvector · Chroma · Weaviate
Ollama · LM Studio (Local LLMs)	Claude Sonnet · OpenAI APIs
Nous Research Hermes (Local AI)	Function Calling · Skill Authoring

Java Enterprise Ecosystem

Java / Jakarta EE	Spring Boot · Spring Cloud
Hibernate / JPA	Microservices Architecture
RESTful APIs	Kafka / Event-Driven Architecture
Angular · React · TypeScript	Clean Code · TDD · Code Review

Cloud, DevOps & Databases

Docker · Kubernetes · OpenShift	CI/CD · Jenkins · GitLab · Maven · Gradle
Oracle · PostgreSQL · MySQL · DB2	MongoDB · Redis · MariaDB

EDUCATION & CERTIFICATION

iSAQB® Certified Professional for Software Architecture (CPSA-F)	2020
Computer Science & Political Science, Goethe University Frankfurt	1991 – 1997
Abitur	1989

LANGUAGES

German Native	**English** Professional	**French** Advanced	**Thai** Basic