

Raik Bieniek | Software Architect and Developer

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in raik-bieniek • 🗣️ rbi

Skills

- *Java*: Java, Spring Boot, Java EE, JavaFX, Apache Karaf, CDI, FreeMarker, Install4J, JAX-RS, JDBC, JPA, Liferay, Maven, OSGI, QF-Test, Spring Framework, TestFX
- *Web*: Angular, React, Typescript, Vue.js, NPM
- *Cloud*: Kubernetes, Azure, Docker, docker-compose, Helm, Keycloak, Kibana, Microservices, OpenShift, kadmin, Kerberos, KVM, Nextcloud, OpenLDAP, Shell-Script
- *Rust*: Rust, Hyper, Serde, Askama
- *Andere*: arc42, Elasticsearch, Github, GitLab, Jira, Oracle, PostgreSQL, ADR, Apache HTTP Server, Bitbucket, C, CentOS, Inno Setup, MySQL, TeamCity
- *Standards*: eForms, eForms DE, OCDS, Open Document Format, PEPPOL, SOAP, SSE
- *Organizational*: Scrum, Technical leadership of a team, Scrum Master, Scrum of Scrums
- *Natural Languages*: English, German

Professional Experience

Nortal AG

remote

Software Developer and Consultant

02/2025 - today

A large legacy system, previously consisting of several separate subsystems developed and operated by different parties, was to be integrated into a unified overall system. Externally maintained subsystems were analyzed and knowledge about their structure and functionality was built up. In addition, concepts to leverage synergy effects in the new overall system were to be developed.

Activities

- Developing and transferring knowledge about the structure and concepts of an existing microservice-based system
- Designing concepts for merging individual components such as Keycloak-based authentication modules
- Consulting on architectural evolution to reduce system complexity
- Developing CI/CD pipelines using GitHub Actions
- Deployment via Azure Container Registry and Azure Kubernetes Service
- Implementing new features for a Vue.js-based web frontend
- Improving maintainability of the TypeScript/Vue.js code through refactoring
- Creating technical stories, e.g. to define alerting requirements

Skills

- *Technologies*: Java, Kubernetes, Spring Boot, Docker, Elasticsearch, Helm, Microservices, PostgreSQL, Typescript, Vue.js, JPA

- *Software:* Azure, Github, GitLab, Jira, Keycloak, Kibana
- *Standards:* eForms, eForms DE

deborate GmbH

Software Architect and Developer

Unterhaching

01/2025 - today

In an established software system composed of several subsystems, the communication interfaces needed to be redesigned. Core parts of the new interface concept were subsequently implemented.

Activities

- Analysis of existing interfaces and identification of conceptual issues
- Iterative design and evaluation of alternative interface concepts
- Discussing results with the development team and incorporating feedback
- Implementation of the chosen concept based on REST, Server-Sent Events, JAX-RS, and CDI/OpenWebBeans
- Creating technical documentation for the new concepts
- Developing and implementing a strategy for gradual migration to the new interface architecture

Skills

- *Technologies:* Java, Docker, Java EE, Oracle, PostgreSQL, CDI, JAX-RS
- *Software:* GitLab, Jira, Kibana
- *Standards:* SSE

percision services GmbH / Bundesdruckerei

Freelance Software Architect

Berlin / remote

02/2022 - 01/2025

For a growing platform for finding public procurement notices, the software architecture was further developed. In addition to technical leadership, new features were implemented mainly in the backend.

Links

- oeffentlichevergabe.de

Activities

- Further development of a successful microservice architecture
- Hands-on implementation and contribution of valuable ideas across the software development lifecycle
 - Architecture: concept development, coordination, and documentation (arc42, Architectural Decision Records (ADR))
 - DevOps: development of Docker images and Helm charts (Kubernetes deployment)
 - CI/CD: building GitLab-based build and deployment pipelines
 - Backend: feature development with Spring Boot, performance optimization of critical code paths
 - Frontend: TypeScript code generation for communication with backend services
 - Operations: creating Kibana dashboards, structuring logs
- Creating an authorization concept and consistently implementing OAuth/OpenID for internal and external permissions
- Developing a versioning and release strategy for individual microservices
- Development in Scrum teams of varying size
- Conducting code reviews to ensure consistent coding standards

Skills

- *Technologies:* Java, Kubernetes, Spring Boot, arc42, Docker, Elasticsearch, Helm, Microservices, PostgreSQL, Vue.js, ADR, JPA
- *Software:* GitLab, Jira, Keycloak, Kibana, OpenShift
- *Standards:* eForms, eForms DE, OCDS, PEPPOL
- *Organizational:* Scrum, Technical leadership of a team

deborate GmbH

Freelance Software Developer

Unterhaching

01/2022 - 03/2023

Data from very complex external database schemas had to be migrated into the schema of the client's own system. A dedicated migration tool had to be developed. Due to the scope, a step-by-step migration had to be ensured while the target system was already in productive use.

Activities

- Independent design and implementation of a tool for complex database migration
- Multi-phase migration over longer periods during ongoing operations
- Multiple source databases (Oracle, MySQL) and multiple target databases (PostgreSQL)
- Successful completion of the migration demonstrates the high quality of the migration tool

Skills

- *Technologies:* Java, Oracle, PostgreSQL, JDBC, Maven, MySQL
- *Software:* Jira, Nextcloud

Carl Zeiss Digital Innovation GmbH / Carl Zeiss Meditec AG

Freelance Software Developer

Munich

10/2021 - 12/2021

Feature development for a data management system for ophthalmology.

Activities

- Test-driven frontend development with JavaFX
- Improving frontend software design
- Introduction of von Spring für Dependency Injection
- Further development of the Install4J-based installer
- Setup of a build in TeamCity

Skills

- *Technologies:* Java, JavaFX, Install4J, Maven, Spring Framework
- *Software:* Jira, TeamCity

deborate GmbH

Freelance Software Developer

Unterhaching / remote

02/2021 - 12/2025

A small JavaFX-based form application grew steadily with new features due to high user demand. The original architecture reached its maintainability limits. A JavaFX expert was needed to incrementally improve the architecture and implement new features.

Activities

- Independent, test-driven development of new features
- Continuous migration from Java 8 to Java 21 and JavaFX 8 to JavaFX 21
- Architectural improvements, e.g., enhanced modularization
- Architecture documentation using arc42

- Developing web and TCP services with Spring Boot
- Designing Oracle database schemas and queries
- Integration of various SOAP-based external systems
- UI Testautomation with TestFX

Skills

- *Technologies:* Java, Spring Boot, arc42, JavaFX, Oracle, FreeMarker, JDBC, Maven, TestFX
- *Software:* Jira
- *Standards:* SOAP

Carl Zeiss Digital Innovation GmbH / Carl Zeiss Meditec AG

Freelance Software Developer

Supported the release of a data management system for ophthalmology.

Munich

02/2021 - 05/2021

Links

- Product page

Activities

- Backend development with Spring Boot
- development of REST services
- Design and implementation of security-related features (e.g., signing/verifying artifacts)

Skills

- *Technologies:* Java, Spring Boot, Maven
- *Software:* Jira, TeamCity

Avision GmbH

Freelance Software Developer

Further development of a web application based on Spring Boot and Angular

Oberhaching / remote

06/2020 - 09/2020

Activities

- Fullstack development in both the Angular 8-based frontend and the Spring Boot-based backend
- Development of complex features after a one week of training period
- Setup of authentication for web services based on TLS client certificates
- Creation of complex JPQL queries (JPA)

Skills

- *Technologies:* Java, Spring Boot, Angular, JPA, Maven
- *Software:* GitLab, Jira

Avision GmbH

Freelance Software Developer

Further development of a Liferay-based application

Oberhaching / remote

11/2019 - 01/2021

Activities

- Further development and administration of a portal application with Liferay (DevOps)
- Development of Liferay portlets
- Oracle DB query creation for development and analysis purposes
- RedHat/CentOS Linux administration, especially Apache HTTP Server, Apache Tomcat

Skills

- *Technologies:* Java, Liferay, Maven
- *Software:* GitLab, Jira, Apache HTTP Server, CentOS, OpenLDAP

Avision GmbH

Freelance Software Developer

Further development of an API gateway for a large logistics service provider

Oberhaching / remote

11/2019 - 01/2021

Activities

- Backend development with Apache Karaf (OSGI), Apache Camel, Spring Core
- Maintenance and error analysis in the high-availability production environment (DevOps)
- Log analysis with the ELK Stack (Elasticsearch, Logstash Kibana)
- Building knowledge about an existing system for the client
- RedHat/CentOS Linux administration, especially Apache HTTP Server, OpenLDAP

Skills

- *Technologies:* Java, Apache Karaf, Maven, OSGI, Spring Framework
- *Software:* GitLab, Jira, Kibana, Apache HTTP Server, CentOS, OpenLDAP

Saxonia Systems AG

Senior Consultant - Software Developer

11/2016 - 09/2019

Saxonia Systems AG / Carl Zeiss Meditec AG

Consultant - Software Developer

Further development of a data management system for ophthalmology.

Munich

02/2016 - 09/2019

Links

- Product page

Activities

- Development of new features for a comprehensive software system with multiple Scrumteams
- Technical leadership and Scrum Master activities for a sub-team with 4-5 developers and testers
- Further development of a large JavaFX-based application, e.g., optimizing performance and memory usage when processing high-resolution images
- Development of features for the Spring Boot-based server
- Development of a TypeScript/Angular-based add-on for the JavaFX fat client
- Other topics: Spring Core, TeamCity plugin development, Install4J installer development, creation of Docker images, system tests with TestFX and QF-Test

Skills

- *Technologies:* Java, Spring Boot, Angular, Docker, JavaFX, Typescript, Install4J, Maven, QF-Test, TestFX
- *Software:* Jira, TeamCity
- *Organizational:* Technical leadership of a team, Scrum Master, Scrum of Scrums

Saxonia Systems AG

Consultant - Software Developer

Further development of the digital Scrum board eteoBoard in a Scrum team.

Görlitz / Dresden

11/2013 - 02/2016

Activities

- Development of new functionalities in the JavaFX-based desktop client
- Implementation of custom CDI scopes to improve resource usage of the server
- Writing code in various programming languages as needed, e.g., Java, C# code for a Microsoft TFS plugin or Pascal code for an Inno Setup-based installer
- Reducing system complexity through a redesign of modularization
- Creation of REST services with JAX-RS/Jersey
- Implementation of database accesses with JPA/Eclipse Link
- Involvement in many areas of the software development process, such as software design, implementation, automated and manual testing, and customer support

Skills

- *Technologies:* Java, JavaFX, CDI, Inno Setup, JAX-RS, JPA, Maven, TestFX, C#
- *Software:* Jira, Bitbucket, Microsoft TFS
- *Organizational:* Scrum, Technical leadership of a team

Saxonia Systems AG

Görlitz

Working Student / Private

11/2011 - 12/2015

Development of the SynchronizeFX library, which allows sharing JavaFX-based data models over the network.

Links

- Github: [zeiss-digital-innovation/SynchronizeFX](https://github.com/zeiss-digital-innovation/SynchronizeFX)

Activities

- Simplification of developing data model synchronizations in JavaFX-based applications through automatic detection of data structures using reflection
- Enabling concurrent modifications of shared data by implementing automatic detection and resolution of conflicting changes

Skills

- *Technologies:* Java, JavaFX, Maven

Other Experience

Resume generator written in Rust

03/2026

Developed a tool that generates résumés, project lists, and skill profiles in multiple formats from a central data source. This ensured consistent and up-to-date documents across PDF, Word, ODT, and various project portals.

Activities

- Design of a data model for CV data in Rust
- Development of generators for PDF and ODT documents
- Derivation of skill lists from individual project entries

Skills

- *Technologies:* Rust, Askama
- *Standards:* Open Document Format

Maintenance and Operation of a Kubernetes Cluster

DevOps Developer

02/2024 - today

Managed a Kubernetes cluster running various server services, including updating existing services, deploying new ones, and removing those no longer needed.

Activities

- Managed approximately 15 software stacks, including Mail, Nextcloud, Gitea, and Paperless.
- Performed monitoring through log analysis using Kibana
- Implemented Single Sign-On across all services using Keycloak and Kerberos

Skills

- *Technologies:* Kubernetes, Helm, kadmin
- *Software:* Keycloak, Kibana, Kerberos, Nextcloud

Migration from docker-compose to Kubernetes

DevOps Developer

03/2023 - 01/2024

Existing server services were migrated from a Docker Compose setup to a Kubernetes-based setup using Helm charts. This improved deployment reproducibility and enabling workload distribution across multiple physical machines.

Activities

- Evaluated different approaches for setting up a Kubernetes cluster, including k3s and kadmin.
- Gradually migrated approximately 15 software stacks, including mail services, Nextcloud, Gitea, and Paperless.

Skills

- *Technologies:* Kubernetes, docker-compose, Helm, kadmin

Smartwatch App Remote for Kodi

App Developer

10/2019

Development and release of an app for Samsung Smartwatches on the Samsung App Store.

Links

- Github: [rbi/tau-react](#)

Activities

- Development of the app "Remote for Kodi", an app for remote control of the Kodi media center
- Sale in the Samsung Galaxy Store
- Frontend development with web technologies TypeScript, React, NPM
- Creation of React components for TAU

Skills

- *Technologies:* React, Typescript, NPM

Migration Docker workloads to docker-compose

DevOps Developer

12/2018 - 12/2019

Migrated existing Docker server services from shell script-based management to Docker Compose, standardizing the configuration of individual services.

Skills

- *Technologies:* Docker, docker-compose, Shell-Script

Development of the DynDNS tool rddns

Rust Developer

12/2017 - 04/2019

Development of a Rust-based application for updating DynDNS entries.

Links

- Github: [rbi/rddns](#)

Activities

- Development of the tool from concept to production readiness

Skills

- *Technologies:* Rust, Hyper, Serde

Migration of VM workloads to Docker

DevOps Developer

03/2017 - 11/2018

Migrated existing server services from a virtual machine-based setup to a Docker-based setup. This resulted in more efficient use of hardware and improved service decoupling.

Skills

- *Technologies:* Docker, Shell-Script

Development of Trading4j

Java Developer

06/2014 - 12/2016

Development of a Java library for implementing reusable and testable expert advisors for automated forex trading.

Links

- Github: [rbi/trading4j](#)

Activities

- Development of a domain model for automated Forex trading
- Development of an integration for the MetaTrader trading software with C and MQL4

Skills

- *Technologies:* Java, C, Maven, MQL4

Operation of Server Services in virtual machines

DevOps Developer

11/2011 - 02/2017

Operated various server services for private use. For better encapsulation, these services were run on KVM-based virtual machines.

Activities

- Operation of OpenLDAP, MIT Kerberos, Bind, Postfix, Dovecot, Nginx und Apache HTTP Server amongst others

Skills

- *Technologies:* PostgreSQL, KVM, Shell-Script
- *Software:* Kerberos, OpenLDAP

Education

oose Innovative Informatik eG <i>iSAQB Certified Professional for Software Architecture, Foundation Level</i>	Dresden <i>01/2016</i>
Hochschule Zittau/Görlitz – University of Applied Sciences <i>Master of Science, Computer Science</i> Grade average: 1.4	Görlitz <i>10/2011 - 11/2013</i>
Hochschule Zittau/Görlitz – University of Applied Sciences <i>UNlcert Level II in English</i>	Görlitz <i>11/2010</i>
Hochschule Zittau/Görlitz – University of Applied Sciences <i>Bachelor of Science, Computer Science</i> Grade average: 1.5	Görlitz <i>10/2008 - 10/2011</i>