Project list

Overview

Period	Role	Customer
06/2026 – present	**Software engineer eBanking**	*ZKB*
01/2022 – 04/2025	**Solutions architect and backend developer**	*SBB*
01/2022 – 04/2025	**Solutions architect and lead developer (full stack)**	*SBB*
01/2019 – 04/2020	**Consulting IT architect**	*SBB*
09/2018 – 12/2023	**Solutions architect and lead developer (full stack)**	*SBB*
02/2015 – 08/2018	**Solutions architect and developer (full stack)**	*SBB*
12/2013 – 02/2015	**Eclipse Rich Client Platform developer**	*UBS*
03/2012 – 09/2013	**Solutions architect**	*ISC-EJPD*
01/2011 – 05/2011	**Consultant technical architecture**	*Automobile insurer*
11/2010 – 12/2010	**Consultant technical architecture**	*PostFinance*
04/2009 – 02/2011	**Technical architect and Java EE developer**	*CSS Insurance*
06/2008 – 03/2009	**Consultant technical architecture**	*SIX*
06/2008 – 03/2009	**Consultant technical architecture**	*Real estate company*
06/2008 – 03/2009	**Consultant technical architecture**	*Capgemini sd&m*
01/2008 – 03/2008	**Chair of the annual general meeting**	*Erasmus Student Network*
05/2007 – 11/2007	**Java developer**	*UBS*
01/2005 – 03/2007	**J2EE developer**	*Steria*
04/2002 – 08/2003	**J2EE developer**	*Credit Suisse First Boston*
11/1999 – 03/2002	**Consultant and developer**	*BT&T Asset Management*
10/1998 – 03/1999	**Diploma thesis**	*Freie Universität Berlin*
08/1998	**IT security intern**	*Elca*
07/1997 – 10/1997	**System administrator**	*University of Pittsburgh Medical Center*

Project details

Software engineer eBanking

06/2026 – present

Customer: **ZKB** - Employer: **2BIT** - Location: **Zurich** - Workload: **100%** - Team: **5 people**
Project: **Enable and Control**

Project goal

Increase the stability and security of eBanking.

Achievements

- Performed architecture audits of eBanking applications.

Technologies and tools

IntelliJ, Java, Kotlin

Methods

Scrum

Solutions architect and backend developer

01/2022 – 04/2025

Customer: **SBB** - Employer: **AKROS** - Location: **Berne** - Workload: **80%** - Team: **7 people**
Project: **CapaInstruction**

Project goal

Manage business constraints on the solution space for automatically calculated train schedules, and compute their application on the fly.

Achievements

- Defined the application architecture based on CQRS, as well as the application's interface definitions.
- Assumed the technical lead in a self-organizing, cross-functional DevOps team.

Technologies and tools

Java 21, Spring Boot 3.4, Swagger 3, OpenShift 4.17, OAuth 2.0, Kafka, Solace, Postgres 17, OpenAPI, AsyncAPI, Maven, Tekton, ArgoCD, Pact, Schema Registry, SBB API portal, DWH, temporal database, consumer-driven contracts, CQRS

Methods

DevOps, SAFe

Solutions architect and lead developer (full stack) *01/2022 – 04/2025*

Customer: **SBB** - Employer: **AKROS** - Location: **Berne** - Workload: **20%** - Team: **5 people**
Project: **Conductor**

Project goal

Distribute master data in a controlled way across the “Capacity Manager” microservice landscape.

Achievements

- Specified a coordination protocol between approx. 10 microservices in approx. 5 teams for distributing master data via Kafka and Solace.
- Designed a technical concept for managing all master data types in the system (approx. 150 types), incl. data governance and data distribution.
- Developed blueprints for producing and consuming master data according to the protocol.
- Defined the application architecture and the application's interface definitions.
- Assumed the technical lead in a self-organizing, cross-functional DevOps team.

Technologies and tools

Java 21, Spring Boot 3.4, Swagger 3, OpenShift 4.17, Kafka, Solace, Postgres 17, OpenAPI, AsyncAPI, Maven, ArgoCD, Pact, Schema Registry, SBB API portal, data governance, data modeling

Methods

DevOps, SAFe

Consulting IT architect *01/2019 – 04/2020*

Customer: **SBB** - Employer: **AKROS** - Location: **Berne** - Workload: **20%** - Team: **4 people**
Project: **itop – Integrated topology platform**

Project goal

Manage the entire life cycle of network assets (signals, tracks, tunnels, …), from planning to dismantling.

Achievements

- Contributed to the design of SBB's integrated topology platform (itop) by specifying a service combining the different aspects of a topology.
- Reviewed the design proposals of the two lead architects (domain boundaries, communication protocol, API conventions, …).
- Coached the first developers of the new platform.

Technologies and tools

Java, Spring Boot, Swagger, OpenShift, REST, JSON, SQL, microservices, CQRS, HATEOAS, OpenAPI, temporal database with variants

Solutions architect and lead developer (full stack) *09/2018 – 12/2023*

Customer: **SBB** - Employer: **AKROS** - Location: **Berne** - Workload: **60%** - Team: **6 people**
Project: **FREd – Release and resource editor**

Project goal

Calculation and editing of topology data (e.g. conflict points on the track network) in a GIS application with a Java backend, for the automatic calculation of train schedules.

Achievements

- Specified and implemented an optimization algorithm operating on graphs, which allowed for an efficient, automatic calculation of train schedules.
- Optimized the performance of nightly batch calculations on temporal graphs.
- Assumed the technical lead in a self-organizing, cross-functional DevOps team.
- Defined the application architecture and the application's interface definitions.
- Distributed the produced data via REST and Kafka (approx. 250,000 records per week).
- Supported the company's internal users.

Technologies and tools

Java, Spring Boot, OpenAPI, OpenShift, Oracle Locator, PostGIS, ArcGIS Pro, C#, .NET, Jenkins, OAuth 2, temporal database, ETL, Pact, Schema Registry, Maven, consumer-driven contracts, automatic code generation

Methods

DevOps, Scrum, SAFe

Solutions architect and developer (full stack) *02/2015 – 08/2018*

Customer: **SBB** - Employer: **Erni and AKROS** - Location: **Berne** - Workload: **100%** - Team: **6 people**
Project: **TEDI – Topology editor**

Project goal

Manage the railway network with a new GIS platform.

Achievements

- Conducted a feasibility study for an application managing the railway network with a new GIS platform.
- Conceived and evaluated alternative solution architectures for an application managing the railway network with a new GIS platform.
- Supported the stakeholders in their decision-making process (cost estimates, roadmaps, ...).
- Built proofs-of-concept with ArcGIS Pro (C#), ArcObjects (Java) and Oracle Locator (PL/SQL) and then took part in the development of the chosen solution.
- Assumed the technical lead in a self-organizing, cross-functional DevOps team.

Technologies and tools

Java, Spring Boot, Swagger, OpenShift, ArcGIS Pro SDK, Oracle Locator, ArcGIS Pro, C#, .NET, ArcObjects, PL/SQL, Maven, temporal database with variants

Methods

DevOps, Kanban, self-organization

Eclipse Rich Client Platform developer

12/2013 – 02/2015

Customer: **UBS** - Employer: **Infocentric** - Location: **Zurich** - Workload: **100%** - Team: **6 people**
Project: **STMP – Straight through mandate processing**

Project goal

Manage mandates (aggregations of portfolios). Users manage a total of approx. CHF 100 billion and have high demands on the usability and speed of the frontend.

Achievements

- Developed highly customizable GUIs for the management of portfolios.
- Investigated data inconsistencies in Oracle and H2.
- Reverse-engineered parts of a proprietary RCP-based framework.
- Integrated the continuous deliveries of external companies supplying backend and frontend components.
- Ensured the multi-version capability of GUIs using OSGi.

Technologies and tools

Eclipse Rich Client Platform 4, Oracle, H2, Tomcat, proprietary frontend framework, Model Driven Development, Java Persistence API, Continuous Integration, OSGi

Solutions architect

03/2012 – 09/2013

Customer: **ISC-EJPD** - Employer: **Itech** - Location: **Berne** - Workload: **100%** - Team: **5 people**
Project: **ZED – Cooperation with external service providers**

Project goals

- Outsource the capture of biometric data for Schengen visa applications by building a highly secured pipeline for biometric data.
- Platform for various authorities to exchange electronic documents concerning foreign residents.

Achievements

- Designed the architecture, specified and prototyped a secure data processing pipeline transporting biometric data captured by private companies throughout the world and centralizing it into the Swiss visa application system.
- Sized the required Oracle databases.
- Defined a standard data exchange format for visa applications using XSD, RSA encryption, cryptographic message syntax (CMS) and digital signatures based on the Swiss AdminPKI.
- Gathered and negotiated requirements with the system's two sponsors: the Federal Office for Migration as data owner and the Consular Directorate as user.
- Formulated the technical requirements of a platform for various authorities to exchange electronic documents concerning foreign residents, and assessed the feasibility of its business requirements.
- Defined the data flows between existing applications of the EJPD and those of the EDA and external partners.
- Ensured compliance with EJPD guidelines for these data flows.
- Reviewed the requirements specification for external service providers (according to WTO rules).
- Extended the ISDS concept (information security and data protection) of the affected applications.

Technologies and tools

XSD, RSA encryption, cryptographic message syntax (CMS), digital signatures, AdminPKI, Oracle DB, MySQL, cryptography, public key infrastructure, WebLogic, data warehouse, Enterprise Architect, HP Quality Center, UML

Consultant technical architecture *01/2011 – 05/2011*

Customer: **Automobile insurer** - Employer: **Capgemini** - Location: **Zurich** - Workload: **50%** - Team: **2 people**

Project goal

Salesforce application for managing the sales of automobile insurance

Achievements

- Specified, prototyped and configured a Salesforce application for managing the sales of automobile insurance. Delivered it as Software-as-a-Service (SaaS) in the cloud. Trained twelve insurance agents.

Technologies and tools

Salesforce, Force.com, Software-as-a-Service (SaaS), cloud

Consultant technical architecture *11/2010 – 12/2010*

Customer: **PostFinance** - Employer: **Capgemini** - Location: **Zurich** - Workload: **50%** - Team: **4 people**

Project goal

Design of interfaces to a data warehouse application

Achievements

- Specified interfaces to a data warehouse application for PostFinance.

Technologies and tools

Data warehouse

Technical architect and Java EE developer *04/2009 – 02/2011*

Customer: **CSS Insurance** - Employer: **Capgemini** - Location: **Lucerne** - Workload: **90%** - Team: **7 people**

Project goal

Extension of the central system for contracts and commissions. Definition of the architecture of a new subsystem, development of the GWT frontend and 3rd level support for the entire central system.

Achievements

- Designed, implemented and maintained GWT GUIs integrated in a Siebel portal for managing insurance contracts.
- Designed, implemented and maintained batches for calculating and printing commissions for brokers.
- Designed, implemented and maintained a rule engine for calculating insurance offers, integrated via the company-wide SOA over six corporate divisions.
- Specified interfaces in the company-wide SOA over six corporate divisions.
- Unified and completed technical documentation about contract management.
- Provided 3rd level support of the core system managing contracts, commissions and products, incl. writing SQL patches and investigating data inconsistencies and performance problems in the Oracle database.
- Coordinated emergency responses to production problems.
- Coached new hires in the development and support teams.

Technologies and tools

GWT, Oracle, WebSphere Application Server, batches, Siebel portal, SOA, Java EE, Google Web Toolkit 1.5, bitemporal database

Methods

UML, Model Driven Development

Consultant technical architecture

06/2008 – 03/2009

Customer: **SIX** - Employer: **Capgemini sd&m** - Location: **Zurich** - Workload: **25%** - Team: **5 people**

Project goal

Manual and automatic entry of large volumes of financial data, and their extraction, filtering and transformation. Development of a generic, metadata-based frontend for manual data entry.

Achievements

- Further developed a metadata-based RCP application for maintaining financial data.
- Designed an automatic data entry system as an ETL process integrated in an SOA, for a company providing financial data.

Technologies and tools

SOA, Eclipse RCP 3, ETL software, Oracle, MySQL

Methods

Quasar, UML

Consultant technical architecture

06/2008 – 03/2009

Customer: **Real estate company** - Employer: **Capgemini sd&m** - Location: **Zurich** - Workload: **25%** - Team: **4 people**

Project goal

Increase the performance and maintainability of the .NET core system for real estate management.

Achievements

- Conducted an architectural audit of a .NET core system for real estate management.

Technologies and tools

.NET

Consultant technical architecture

06/2008 – 03/2009

Organization: **Capgemini sd&m** - Location: **Zurich** - Workload: **50%** - Team: **3 people**

Project goal

Bids pertaining to software re-engineering, development off-shoring, staffing and application management

Achievements

- Wrote bids (incl. raw architecture, effort estimates and presentations) pertaining to software re-engineering, development off-shoring, staffing and application management for companies in finance, logistics or real estate.

Technologies and tools

Company-internal cost estimation framework and project methodology

Chair of the annual general meeting

01/2008 – 03/2008

Organization: **Erasmus Student Network** - Location: **Zurich, Besançon** - Workload: **100%** - Team: **4 people**
Project: **Annual General Meeting**

Project goal

Run the AGM efficiently, productively and democratically.

Achievements

- Prepared and moderated a 4-day conference of 450 delegates from all over Europe.

Java developer

05/2007 – 11/2007

Customer: **UBS** - Employer: **Elan** - Location: **Zurich** - Workload: **100%** - Team: **3 people**

Project goal

Automation of manual processes for closing accounts and settling deposits. Development of a small framework and two applications based on a web portal and host emulation.

Achievements

- Designed and developed applications automating manual processes in a web portal using Swing.
- Designed and implemented a synchronous Java library that executed business transactions in an asynchronous and unstable environment.
- Trained and coached two application developers.

Technologies and tools

Java, Oracle, WebSphere Portal, Swing, host emulation, screen scraping

Methods

Rapid Application Development

J2EE developer

01/2005 – 03/2007

Customer: **Steria** - Employer: **Itech** - Location: **Zurich** - Workload: **100%** - Team: **10 people**
Project: **UeLS Zürich (Higher-level control system)**

Project goal

Development of a web application for configuring and administering a SCADA (Supervisory Control and Data Acquisition) system, i.e. a distributed system controlling the highway tunnels of the Canton of Zurich.

Achievements

- Specified and developed the web interface of a distributed monitoring system for highway tunnels, using Struts and Tiles.
- Built an automated unit test infrastructure based on Struts Test Case and HtmlUnit.
- Wrote EJBs deployed on JBoss.
- Integrated and maintained applets.
- Displayed GIS information (alarms on the map of the highway network).

Technologies and tools

JBoss 4, Struts, Tiles, JBoss Cache, applets, Enterprise Java Beans, HtmlUnit, Struts Test Case, geographic information system (GIS)

Methods

Extreme Programming

J2EE developer

04/2002 – 08/2003

Customer: **Credit Suisse First Boston** - Employer: **Logica (LogicaCMG)** - Location: **Zurich** - Workload: **100%** - Team: **8 people**
Project: **Banking@CSFB**

Project goals

- e-Banking application for institutional clients.
- Online payment system.

Achievements

- Designed, developed and supported an e-Banking portal, using J2EE on WebLogic and Oracle in a highly secured environment.
- Automated the build and installation processes of the various components of the portal, using Jakarta Ant.
- Gathered the requirements for an online payment system and specified it, coordinating all involved stakeholders such as sponsors, Corba service providers, business and IT operations.
- Implemented Java Beans and servlets using IBM Visual Age, Borland JBuilder and Eclipse.
- Ensured the platform's continuous operation during its launching phase by providing the operations team with round-the-clock technical support.

Technologies and tools

Java, J2EE, WebLogic, Oracle, servlets, JavaServer Pages, Single Sign-On, Java Beans, Jakarta Ant, IBM Visual Age, Borland JBuilder, Eclipse, Corba, UML

Consultant and developer

11/1999 – 03/2002

Customer: **BT&T Asset Management** - Employer: **Logica (LogicaCMG)** - Location: **Zurich** - Workload: **100%** - Team: **4 people**

Project goal

Web-based and Excel-based data analysis tools for asset management experts

Achievements

- Responsible for the design, implementation, rollout and maintenance of an automated data feed from Bloomberg into an MS SQL Server database, incl. stored procedures.
- Developed an intranet application for financial analysis, based on Swing applets, servlets and ASP pages.
- Conducted and presented studies on document management, server configuration and database scalability.

Technologies and tools

Internet Information Server, applets, Active Server Pages, Visual Basic for Applications, Java, Swing, servlets, Bloomberg interfaces, MS SQL Server 6.5 and 2000, Transact-SQL

Diploma thesis

10/1998 – 03/1999

Organization: **Freie Universität Berlin** - Location: **Berlin** - Workload: **100%** - Team: **2 people**
Project: **JacORB**

Project goal

Java-based implementation of CORBA

Achievements

- Contributed to the development of JacORB.
- Developed the authentication part of the security service by using digital certificates based on a public key infrastructure (SPKI).

Technologies and tools

Java, CORBA, digital certificates, public key infrastructure (SPKI)

IT security intern

08/1998

Organization: **Elca** - Location: **Lausanne** - Workload: **100%** - Team: **2 people**

Project goal

External internet security of the company

Achievements

- Conducted an audit of the external internet security of the company using penetration tests.

System administrator

07/1997 – 10/1997

Organization: **University of Pittsburgh Medical Center (UPMC Health System)** - Location: **Pittsburgh, PA** - Workload: **100%** - Team: **1 person**

Project goal

Increase office automation in a research group.

Achievements

- Maintained a 15-node Windows NT network.
- Trained twelve users.
- Chose hardware and software to purchase, installed it and troubleshot it.

Technologies and tools

Windows NT, Microsoft Office