

# Curriculum vitae

## PERSONAL INFORMATION



## Benjamin Klum

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📅 Date of birth 14/01/1983

## PERSONAL STATEMENT

**Senior software developer** specializing in back-end development. Over 10 years of experience in enterprise application engineering. Well-versed in numerous programming languages including Java, Kotlin, TypeScript and SQL.

**Advanced application architect** with strong background in specification, communication and documentation. Successfully employing state-of-the-art software modeling approaches such as domain-driven design. Familiar with requirements engineering.

**Passionate music software developer** with C++ skills.

## WORK EXPERIENCE

02/05/2017–Present

### Freelancer

5 assignments, 3 companies

Software development and software architecture consulting with focus on back-end

15/09/2014–30/04/2017

### Back-end developer and application architect

Avantgarde Labs GmbH

In my largest assignment, I worked as application architect on an E-Commerce project, specifying and estimating the integration of new features as well as conceiving and documenting a Microservice-based target architecture. I interacted on a daily basis with requirements engineers and developers.

In addition, I worked as part of a development team on a handful of data-intensive projects using Scala, Java, graph databases and some of the more recent functional reactive technologies such as Akka and RxJava. Occasionally I was responsible for developing prototypes employing ETL tools, big data and search technology.

19/06/2014–Present

### Music software developer and vendor

Benjamin Klum, Helgoboss Projects

As a sideline, I conceive, design, develop and sell plug-ins for professional DAW software, targeted at performers and producers of electronic music. The main technologies I use for this purpose are React, RxJS, C++ 11, CMake, MSVC, RxCpp, VST SDK and REAPER SDK.

Additionally, I publish general-purpose open source libraries from time to time.

The results of my work are presented on my project website [www.helgoboss.org](http://www.helgoboss.org).

15/09/2008–31/08/2014

### Full-stack developer and application architect

T-Systems Multimedia Solutions GmbH

In 10 mid- to large-sized projects I was responsible for design, implementation and maintainance of enterprise-scale data-intensive Java web applications, contributing to both back and front ends.

Over time I was more and more entrusted with architectural responsibility, requirements engineering tasks, effort estimates, direct contact to clients and technical lead positions. The projects covered a wide range of sectors including Telecommunications, Media, Health, Public, Logistics, Marketing and

Transport.

1 Sep 2007–31 Aug 2008

### Working student

T-Systems Multimedia Solutions GmbH

I worked for the load testing department and my task was to develop a Java web application for management and analysis of load testing results.

## EDUCATION AND TRAINING

- 16/05/2014 **Certified Professional for Requirements Engineering**  
IREB®, iSQI
- 31/05/2013 **Certified ScrumMaster**  
ScrumAlliance
- 28/06/2012 **Oracle Unified Business Process Management Suite 11g Certified Implementation Specialist**  
Oracle
- 30/11/2010 **Oracle Certified Professional Java SE 6 Programmer**  
Oracle
- 01/10/2002 **Diploma in Informatics**  
Friedrich Schiller University Jena  
Specialization: Programming, software engineering and compiler construction

## PERSONAL SKILLS

Mother tongue(s) German

Foreign language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	C1	B2	B2	C1
Czech	A2	B1	A2	A1	B1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user  
Common European Framework of Reference for Languages

Job-related skills

**Languages:** Java, TypeScript, C++ 11, SQL, Kotlin, HTML, CSS, UML 2, BPMN 2, Scala, Shell, XSLT, Python, XSL-FO

**Architecture and code quality:** arc42, Domain-Driven Design, Clean Architecture, Object-Oriented Design, GoF Design Patterns, REST, Microservices, GRASP Patterns, FindBugs, PMD, Checkstyle

**Web frameworks and APIs:** JAX-RS, Jersey, Spring MVC REST, Servlets, Firebase (Firestore, Auth, Hosting, Functions), JAX-WS, CXF, WebSocket++, Node.js, PayPal IPN, Amazon AWS SES

**Test frameworks and libraries:** JUnit, Mockito, TestNG, JMockit, Cucumber, Jest

**Other frameworks and libraries:** Spring Boot 2, Spring Cloud, OSGi Core, JPA, Hibernate, Liquibase, Spring Data, Camunda, Activiti, Jackson, Spring Core, Spring Security, EJB 3.1, EclipseLink, AspectJ, C++ Boost, Quartz, Rhino, Bean Validation, JNI, CDI, Guice, Dagger 2, DeltaSpike

**Development tools:** Git, IntelliJ IDEA, CLion, WebStorm, JMeter, SVN, Rational Synergy, Visual

Studio for C++, PyCharm, Eclipse, VisualVM, SoapUI

**Build management tools:** Maven, npm, CMake, Gradle, Ant, Jenkins

**Database management systems:** Oracle, MySQL, PostgreSQL, HSQLDB, SQLite

**DevOps tools:** Docker, Ansible, Rancher 1, Tomcat, Nginx, Jetty, JBoss

**Logging, metrics and tracing:** Logback, SLF4J, Brave, Log4j, Splunk, Kibana, Kamon, Metrics, Graphite, Grafana, Jaeger, Zipkin

**Caching and messaging:** Memcached, Ehcache, RabbitMQ, AMQP, JMS, ActiveMQ

**Software development processes and frameworks:** Scrum

**Audio editing and development:** REAPER, IPlug Framework, REAPER SDK, Cubase, Nuendo, Steinberg VST SDK

**Big data and ETL tools:** Spark, Talend

**Frontend frameworks and libraries:** React, Material UI, Redux, Redux Observable, Reslect, Swing, jQuery, Wicket

**Requirements engineering:** Use Cases, User Stories, Requirement Templates, BDD, Gherkin

**Diagramming tools:** Enterprise Architect, PlantUML, yEd, Visual Paradigm for UML, Enterprise Architect SDK

**Miscellaneous:** Ubuntu, Debian, ArchLinux, Windows, Confluence, Swagger, GitHub, Bitbucket, JIRA, Microsoft Office

*For a detailed project history and a regularly updated skill profile, please see my website [www.benjamin-klum.com](http://www.benjamin-klum.com).*