

# Mats Krengel

SENIOR BACKEND ENGINEER

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## Summary

I am a generalist in backend engineering and operations of cloud infrastructure with 8+ years of professional experience. During that time I've defined, implemented and operated services, tools and platforms in Elixir, Java, C++ and JavaScript used by thousands of concurrent users and players.

Besides my profession as an engineer, I like to run long distances, hike and play the guitar.

## Skills

<b>Programming Languages</b>	Elixir, Java, C++, JavaScript, C#
<b>Frameworks and Libraries</b>	Phoenix, Spring Boot, libuv, GWT
<b>Databases</b>	PostgreSQL, MySQL, AWS DynamoDB
<b>Operations &amp; Infrastructure</b>	AWS, Docker, Kubernetes, Terraform, Chef
<b>Tools &amp; Workflow</b>	Git, CircleCI, Jenkins, Datadog, Opsgenie, Elasticsearch, Logstash, Kibana, Jira & Confluence
<b>Operating Systems</b>	macOS, Linux (Alpine, Debian & Ubuntu distros), Windows
<b>Languages</b>	German (native), English (professional)

## Experience

### Geenee GmbH

Berlin, Germany

SENIOR BACKEND ENGINEER

Feb. 2016 - now

- Backend engineering on a SaaS image recognition platform
- Designed and implemented various core platform services offering RESTful HTTP APIs in Elixir (Phoenix), Java (Spring Boot and Dropwizard) and JavaScript (Node)
  - Implemented authentication and authorization service in Elixir storing user, group and permission data in PostgreSQL and generating JSON Web Tokens upon login
  - Implemented content activation service in Elixir used to enable image projects to be recognized by the core recognition service
  - Created and maintained image annotation API in Java using Spring Boot which finally got replaced by Elixir in a platform rewrite
- Maintain and improve web server subsystem of core image recognition service written in C++ using libuv
- Replace manual orchestration and scaling of AWS EC2 instances with AWS ElasticBeanstalk and Docker
- Creating and maintaining AWS cloud infrastructure using Terraform
- Setup continuous integration and continuous deployment pipelines for existing and new services using Github and CircleCI

### Bigpoint GmbH

Berlin, Germany

BACKEND ENGINEER & TECH LEAD ASIA INTEGRATION

Dec. 2010 - Jan. 2016

- Leading a small development team to integrate Drakensang Online into platforms of Asian and MENA region license takers
  - Extending the game platforms API to integrate with partner payment and virtual currency systems as well as Chinese and Korean anti-addiction policies
  - Release engineering of individual game builds for license takers
  - Migrating game servers from private datacenter machines into IBM Softlayer, AWS and license taker infrastructure
  - Attempted to slice monolithic game servers into smaller services running in Docker containers on partner platforms
- Backend engineering on Drakensang Online, a massively multiplayer online role-playing game
  - Designed and implemented core game administration and CRM tool as web application in Java and the Google Web Toolkit
  - Optimized inter-process communication of forked game server processes using shared memory in C++
  - Operated deployments and database migrations of global production game servers
  - Implemented gameplay and UI features in the game client written in C++

## Education

### Mediadesign University of Applied Sciences

Berlin, Germany

B.SC. IN GAME DESIGN & DEVELOPMENT

Oct. 2007 - Sep. 2010

- Game and realtime simulation development using C++ and Java
- UDP and TCP game server networking and messaging systems in C++ and C#

## Technical School

IT BUSINESS ASSISTANT

- Business accounting and business administration
- Office IT and software development in C++, PHP and relational databases

*Plön, Germany*

*Aug. 2003 - Jun. 2005*

## Presentation

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### Korea Game Conference

CO-PRESENTER IN 'FROM RETAIL TO FREE TO PLAY: THE DRAKENSANG ONLINE JOURNEY'

- Introduced Drakensang Onlines technical stack and how the game was modified for a Korean audience

*Seoul, S.Korea*

*Nov. 2014*