

# Martin Beckmann

## Software Developer

Fullstack with focus on  
backend development

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## Systems Development

Rust  
C++  
Qt

## Databases

MongoDB  
Elasticsearch

## Web Development

TypeScript  
React + Redux  
Node.js  
HTML5 / Sass

## Soft Skills

Curious  
Versatile  
Motivated  
Creative  
Solution Oriented  
Open & Approachable

## Other

English / German  
Git  
Jira / Kanban

# Projects

### Initiated Evaluation of Rust as Language for Backend Development

To measure the performance overhead of Node.js I ported an existing server to Rust.

- up to 50% decreased latency
  - dropping the V8 engine reduced RAM usage, binary size, startup time and CPU usage
  - created a basis for fearless concurrency with Rust
- used technologies: *Rust, Tokio, WebSockets*

### Further Development of a Native Caching System for Android and iOS Apps

This component manages the communication with a custom backend as well as the caching of received data.

- fixed bug which rarely caused unreliable network communication
  - implemented immediate delivery of partly cached requests for snappier apps
  - wrote unit- and integration-tests
- used technologies: *C++ 14, WebSockets*

### Design and Implementation Multiple Developer Tools

To speed up the development process and avoid common bugs, I designed new tools and developed existing tools further.

- designed a schema-first approach for our custom backend library
  - generated code for TypeScript, Kotlin und Swift
  - developed the necessary infrastructure to do integration tests with Jest
  - simple plugin for JetBrains IDEs
- used technologies: *TypeScript, Node.js, Jest, Java*

### Replaced License Keys With Floating Licenses

To keep people from essentially stealing software by copying around license keys, I implemented a floating license server which keeps track of concurrent uses.

- refactored license related code in huge legacy code base
  - kept client compatibility with old and exotic compilers and operating systems
  - increased revenue by preventing abuse of a trust based license system
- used technologies: *C++ 11, C++98, Qt 5*

### Full Stack Development of Various Content Management Systems and Web Applications

To cater to the needs of each customer every project was developed from the ground up.

used technologies: *TypeScript, React, Node.js, MongoDB, Elasticsearch*

# Experience

- |                   |   |                            |
|-------------------|---|----------------------------|
| 03.2020 - today   | Qt Systems Developer                    | Froglogic / The Qt Company |
| 10.2016 - 03.2020 | Studied Computer Engineering            | HAW Hamburg                |
| 06.2016 - 03.2020 | Working Student Web Development/Tooling | Appbase Hamburg            |