



Robert Ende

Software Engineer

✉ ROBERT@ENDE.PRO

🌐 ENDE.PRO

🐙 GITHUB.COM/ENDEBERT

📍 Berlin, Germany

🗣 German (native)

🗣 English (fluent)

Summary

7+ years of experience in R&D of software based networks, Real Time Communication and M2M/IoT.

2+ years of experience designing & maintaining scalable enterprise level hardware and software solutions.

Education

High School Diploma

Charles-Darwin
Gymnasium
2008

Bsc. Computer Science

Freie Universität Berlin
2018

Languages

Java

Javascript

TypeScript

HTML/CSS

Rust

Python

Dart/Flutter

Work Experience

Software Engineer

05/2023 - 11/2023

MicroDoc - hardware & software IT consulting

Berlin, Germany

- design B2B/B2C online portal and middleware for automotive charging for major german electricity provider

Full Stack Engineer

10/2018 - 04/2021

Tillhub GmbH - cloud-based all-in-one point-of-sale system

Berlin, Germany

- create enterprise level hardware & software solutions
 - requirements analysis
 - hardware/performance evaluation
 - frontend applications Flutter
 - scalable backend Node.js REST JSON JSON Schema GCP PostgreSQL
 - communication with proprietary devices Flutter Plugin
 - multiplatform Android iOS
 - automatic deployment CI/CD Github Actions fastlane
 - full project ownership Scrum
 - >1000 devices running 24/7
- extend & maintain large scale web dashboard Vue.js Microservices

Working Student

04/2011 - 04/2018

Fraunhofer FOKUS - (R&D) Software-based Networks

Berlin, Germany

- create demo applications Android SPA Audio/Video conferencing WebRTC
- build & improve application platforms & software testbeds Java Python
 - 5G SIP UDP M2M/IoT NoSQL Packet Analysis Docker
- design use-cases for future technologies VoLTE Augmented Reality
- spec-compliant reference implementations

Project Experience

OpenIMS Core + MonsterRCS (2011 - 2013)

Rich-Communication-Suite; telco system and user application, with instant messaging, video calls, etc.

knowledge gained: working in small, internal team; Java + Android experience (backend & demo applications); spec-compliant (reference) implementation; database handling (SQL + MongoDB); testing; packet analysis (Wireshark)

Cross-layer Service-to-Network Orchestration (2013 - 2015)

research project with Japanese NTT; develop use-cases for real time convergence of media streams

knowledge gained: working with international partnership; use-case concept/design: rapid prototyping; working with experimental technology; (Android + WebRTC)

OpenMTC (2015 - 2017)

reference implementation of oneM2M standard, designed for R&D of M2M/IoT applications

knowledge gained: Python experience (backend), M2M protocols, including reverse-engineering of proprietary protocols; spec-compliant implementation; testing

reTHINK (2017 - 2018)

EU research project to create OTT service, in partnership with telco providers and research institutes

knowledge gained: use-case concept/design/implementation (full-stack); design/implementation of pre-commercial solutions; spec drafting/creation; rapid prototyping; API design/implementation; M2M protocols; IoT-Web interconnection

Tillhub Dashboard (2019 - 2020)

web-based point-of-sale management dashboard; revenue statistics, product inventory, employee management, hardware overview, etc.

knowledge gained: working on enterprise-scale web application; working with large databases; CI/CD (backend & frontend); extending public facing REST API (Node.js); microservices; localization (via Phrase); resilient currency value handling, formatting, calculations in javascript

Cloud-based product label printing solution (08/2018 - 2019)

hardware & software project to facilitate large scale label printing

knowledge gained: full project ownership; writing proprietary messaging protocol; raw communication over USB serial bus; distributed job handling; hardware status report; remote device authentication; Server-sent events; PostgreSQL LISTEN/NOTIFY

Livehub (2019 - 04/2021)

tablet bound to a cash register; shows shopping cart contents, payment transaction status, ads

knowledge gained: hardware evaluation; writing performant css animations; device authentication; automatic software update; Dart & Flutter; serving web content inside Flutter app

Warehub (2020 - 04/2021)

mobile app for warehouse management (barcode scanning, product verification, stock taking)

knowledge gained: writing Flutter plugins; CI/CD; support external HID; Test Driven Development; Domain Driven Design; database migrations; background sync of large data

Personal Projects

SquadMC (2018 - 2020)

[GITHUB.COM/ENDEBERT/SQUADMC](https://github.com/ENDEBERT/SQUADMC)

[SQUADMC.ENDE.PRO](https://squadmc.ende.pro)

Open-Source map-based mortar calculator for the video game "Squad"; ~500 daily (unique) users

knowledge gained: creating web-application optimised for mobile & desktop; front-end development & design using Vue.js; error reporting & handling; basic google analytics integration

Sandspiel (09/2022 - 03/2023)

[GITHUB.COM/ENDEBERT/SANDSPIEL](https://github.com/ENDEBERT/SANDSPIEL)

[SANDSPIEL.ENDE.PRO](https://sandspiel.ende.pro)

A prototype implementation of the classic falling-sand game written in Rust

knowledge gained: programming in Rust, incl. multithreading/concurrency; rust-wasm