

BOJAN KOVACHKI

Senior Full-Stack Software Engineer |

React · TypeScript · Electron · Rust

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Senior full-stack software engineer with 10+ years across product engineering and applied AI, including six years at realworld one building production software across desktop, web, Android/VR, and a shared Rust SDK. Strongest in React/TypeScript and reliability-oriented engineering: complex state, downloads, authentication, recovery, performance, and data-heavy interfaces. Owns work end to end - from architecture and implementation to testing, incident diagnosis, rollout, and production recovery.

CORE EXPERTISE

Frontend & Product: React, TypeScript, JavaScript, HTML/CSS, Chakra UI, React Query, Recoil, responsive UI, data visualization

Systems & APIs: Rust, WASM/FFI, REST, gRPC, OAuth/OIDC, Auth0, async/concurrent workflows

Desktop & Mobile: Electron, Node.js, Android, WebView, JNI, Windows desktop, VR launcher flows

Engineering Practices: System design, reliability/recovery, performance, unit/integration testing, CI/CD, Azure DevOps, Git, AI-assisted development

EXPERIENCE

realworld one GmbH & Co. KG | Senior Full-Stack Software Engineer (originally AI Software Engineer)

Freiburg im Breisgau | Aug 2020 - Present

- Own end-to-end development across an Electron/React desktop launcher, Android/VR application, shared Rust launcher SDK, and React web admin/analytics portal used in enterprise VR workflows.
- Led the desktop content-download migration from a legacy TypeScript pipeline to the shared Rust SDK engine used on Android, integrating generated IPC/FFI, queue control, pause/resume, persistence, archive post-processing, live progress/error mapping, and feature-flagged rollout.
- Hardened authentication and session recovery across network loss, token expiry, app/service resume, and logout/login races, coordinating Rust SDK state with Android/WebView and desktop behavior.
- Diagnosed and fixed production startup/update incidents, including an intermittent Quest 3S ANR caused by blocking SDK initialization and a desktop updater that treated transport failures as "up to date"; introduced non-blocking initialization, explicit failure states, strict 2xx validation, bounded retries, and richer diagnostics.
- Built data-heavy React/TypeScript analytics for User Access Management: company- and user-level usage views, charts, country metrics, feedback ratings, session/seat history, CSV exports, and responsive mobile layouts; optimized large tables and React Query data flows.
- Improved user-file synchronization, upload, and conversion reliability with batching, checksum/file-size validation, periodic synchronization, resilient error handling, and restart-safe UI state.
- Contributed to multiplayer session, notifications, community discovery, launch flows, and cross-platform UX; paired major changes with targeted unit/integration tests and safe feature-flagged rollouts.

Tech: React, TypeScript, Electron, Node.js, Chakra UI, React Query, Rust, WASM/FFI, Android, WebView, JNI, REST/gRPC, OAuth/OIDC, Auth0, Azure DevOps

EARLIER EXPERIENCE

voice INTER connect GmbH | Student Researcher / Master Thesis

Dresden | Jun 2019 - Mar 2020

- Built and evaluated a local speech-based question-answering assistant for industrial environments, combining NLP/ASR, backend services, real-time messaging, and a web interface; presented the prototype at SPS 2019 and embedded world 2020.

Tech: Python, Flask, PyTorch, Pandas, NLP/ASR, WebSockets, MQTT, Vue.js, Docker

3dvisionlabs GmbH | Student AI Researcher - Computer Vision

Chemnitz | Jan 2019 - Mar 2019

- Trained and evaluated custom object-detection models and benchmarked YOLOv3/CNN inference across Intel NCS/NCS2, CPU, and GPU targets.

Tech: Python, Deep Learning, CNNs, YOLOv3

Technische Universität Chemnitz | Student Assistant - Artificial Intelligence

Chemnitz | Nov 2018 - Feb 2019

- Researched AI/Industry 4.0 developments, supported industrial AI use cases, and prepared technical training and publication material.

WildBytes DOO | Software Engineer

Skopje | Mar 2016 - Aug 2016

- Developed web-scraping software plus web and mobile applications.

Tech: Node.js, AngularJS, MongoDB, Ionic

Frontwisegroup | Software Engineer & IT Consultant

Skopje | Sep 2015 - Feb 2016

- Built web/mobile applications for Dutch clients and taught recruitment staff how frontend and backend software development roles work.

Tech: AngularJS, Ionic

Iborn.net | Software Engineer

Skopje | Oct 2014 - Sep 2015

- Built and maintained health-insurance web portals and mobile applications for the Danish market.

Tech: .NET, ASP.NET MVC/WebForms, Entity Framework, SQL, AngularJS, Ionic

SELECTED PROJECT

Recovery Probe | Open-source resilience testing for web applications

github.com/BojanKovachki/recovery-probe

- Built a Playwright-based helper that runs a normal baseline, injects controlled request failures, verifies the fault actually occurred, and checks whether the application recovers. The beta includes HTTP-error, connection-failure, and invalid-JSON fault recipes plus real-browser integration tests and CI validation.

GasMap | Earlier web mapping project

- Built a web application that displayed nearby gas stations geographically with real-time opening hours, fuel prices, and proximity information - early hands-on experience with map-based user interfaces.

EDUCATION & PUBLICATION

M.Sc. Web Engineering (120 ECTS)

Technische Universität Chemnitz, Germany | 2016 - 2020

Focus: web/software engineering, distributed systems, AI/ML; master thesis in NLP/ASR.

B.Sc. Computer Science and Engineering (240 ECTS)

Ss. Cyril and Methodius University, Faculty of Computer Science and Engineering, Skopje | 2010 - 2015

Languages

English C2

German B2

Macedonian native

Serbian highly proficient

Publication

"Increasing Industrial Productivity by Employing a Smart Speech-Based Question Answering Assistant" - ESSV 2020, Magdeburg