# EMRE ERGUN

## SENIOR SOFTWARE ENGINEER

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## SUMMARY

With over 10 years of experience in software development for low-level platforms using C/C++, I have expanded my expertise over the past two years to include TypeScript (and JavaScript) for modern web and mobile development. I specialize in contemporary frameworks such as React, React Native, and Next.js. My background in low-level software development for diverse industries–from aviation to industrial communication–has equipped me with strong problem solving abilities and a solid understanding of software architecture. I have since applied these skills to building dynamic, responsive applications across both frontend and backend.

## SKILLS

**Languages**: JavaScript  TypeScript  HTML  C  C++  Rust

**Frontend**: React  React Native  Next.js  CSS  Tailwind

**Backend**: Node.js  Express.js  REST APIs  PostgreSQL  MongoDB

**State Management**: React Context  Zustand

**Validation & Fetching**: Zod  TanStack Query

**Deployment & DevOps**: Docker  Vite  Vercel  Netlify  Expo  GitHub Actions

## WORK EXPERIENCE

**Senior Software Engineer**                                      Jan 2023 – Present
EngramSoft (freelancer)                                              Istanbul, Turkey

- Developing web and mobile apps using React, Next.js, and React Native, and backend Rest APIs using Node and Express.
- Created my own portfolio and blog websites, automatically being built and deployed into cpanel with the GitHub actions.
- Integrated supabase at the backend for data storage and authentication of the blog website.
- Built admin dashboard, managing products and orders, with Next.js deployed on Vercel, and shopping app with React Native with stripe payment integration.

**Senior Software Engineer**                                      May 2024 – Oct 2024
Borda Technology                                                    Istanbul, Turkey

- Contributed to the development of IoT-based indoor tracking solutions for the medical industry, focusing on BLE data flow and system integration.
- Designed and maintained software modules in C/C++ running on Embedded Linux, with concepts applicable to backend microservices and real-time data handling.
- Interfaced with MQTT-based communication systems, similar to event-driven architectures in modern web backends.
- Collaborated cross-functionally to deliver scalable, secure solutions with a focus on data accuracy and system performance.

**Senior Software Engineer**                                      Aug 2021 – Dec 2023
Kunbus GmbH                                                        Istanbul, Turkey

- Built protocol parsers and communication layers (e.g., EtherNet/IP, IO-Link), applying concepts like state machines and data serialization, now useful for API design and web socket handling.

- Led backend-style architectural efforts including queue management, synchronization, and modular software design.

- Developed automation and CI/CD pipelines using Python and JavaScript—foundational experience for web deployment and testing flows.

- Maintained CMake-based build systems, directly translatable to modern Node.js and Docker-based builds.

- Worked in Agile, international teams—valuable experience for remote-first or cross-timezone web development projects.

**Software Engineer**                                           Oct 2018 – Jul 2021
THY Technic A.S.                                                Istanbul, Turkey

- Developed user-facing Qt/QML apps to visualize embedded system outputs—experience similar to desktop/web dashboards.

- Integrated and debugged drivers and systems with structured, testable code in C/C++, useful in backend service development.

- Followed aviation-grade development practices (DO-178C), emphasizing reliability and clean code—transferable to frontend/backend production quality.

**Software Engineer**                                           Nov 2013 – Mar 2018
Academic Research Group Ltd. Sti.                               Istanbul, Turkey

- Designed end-to-end IoT systems including firmware, communication protocols, and user interfaces—mirroring full-stack principles.

- Built low-level communication stacks (RS232, Ethernet, USB), experience now applicable to WebSocket, REST, and event-driven services.

- Implemented systems integrating hardware modules (GSM, Wi-Fi), equivalent in complexity to integrating cloud SDKs or third-party APIs in web/mobile development.

- Delivered most solutions in C as modular, testable codebases—good foundation for Node.js, Rust, or Python backend development.

EDUCATION

**Karadeniz Technical University**                              Trabzon, Turkey
B.S. in Electrical and Electronics Engineering                 Oct 2007 – Dec 2012