Caner Demir

Software Engineer / Product Engineer

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Summary

Product-minded Software Engineer with a 4+ year foundation in frontend development (React, Next.js), now building products end to end in the critical communications domain. Recently shipped three products, an RF coverage planner, a multi-tenant 4G/5G Network Management System and a Push-to-Talk platform, working across Python, Java and Kotlin codebases with AI-assisted development, and contributing to open source. A finance background adds a business-oriented lens to data-driven, real-time and mapping interfaces.

Professional Experience

Opticoms Telecommunication

Software Engineer, Dec 2023 – Present

- Delivered an **RF coverage planning system** end to end: users select radios on an interactive **Leaflet** map, a **Python** engine calculates coverage, and results are visualized in the web interface.
- Delivered a multi-tenant **Network Management System** end to end for private 4G/5G networks built on **Open5GS** and **Druid Raemis**, with a **Java** backend and a web interface: subscriber management, IMSI lock, service area restriction, device brand identification, alarm tracking, and monitoring of core services, servers and switches.
- Delivered a **Push-to-Talk platform** end to end: **Kotlin** Android app, web dispatch panel, and real-time group voice communication over **WebRTC (LiveKit)**.
- Engineered an offline-first disaster response platform for **TUBITAK** (Turkish National Research Agency) using **Vanilla JavaScript, OpenStreetMap, Leaflet**, and **WebSocket**, enabling real-time GPS victim tracking and peer-to-peer messaging with zero server dependency in infrastructure-down emergency scenarios.
- Migrated a 7,000+ line legacy jQuery codebase to a modern **React** architecture, reducing reported bug rate by ~30% and cutting average feature delivery time from 2 weeks to 5 days.
- **Mentored** 3 junior developers through weekly code reviews, reducing average PR review cycle time by 40%.

BOM Software Agency

Frontend Engineer, May 2022 – Dec 2023

- Rebuilt the Oggusto platform from a legacy codebase to **Next.js**, reducing page load time by 35% and scaling the site to reliably serve **1.5–2 million monthly visitors**.
- Delivered 10+ fully responsive **Next.js** websites across automotive, logistics, and healthcare sectors, averaging 95+ Lighthouse performance through SSR, image lazy loading and code splitting.
- Built the official promotional website for the film 'Efsane' using **Next.js** with server-side rendering and structured metadata (Open Graph, JSON-LD), driving a 50% increase in organic search traffic within 3 months of launch.

Open Source

Open Source Contributor

- **xterm.js** (the terminal emulator behind VS Code): fixed tall glyphs being clipped at the row edge in the **DOM renderer** (issue #5240) using **CSS overflow: clip**, and added a cross-browser **Playwright** regression test. Merged (PR #6265).
- **kornia** (PyTorch computer vision library): hardened input validation in the epipolar geometry, homography and solver modules so invalid inputs raise a clear **ShapeError** naming the argument instead of crashing or silently returning wrong values; added regression tests. 3 merged PRs (#6434, #6456, #6504).

Skills

- **Languages**: JavaScript, TypeScript, HTML5, CSS. Some experience with Python, Java, Kotlin
- **Front-end**: React, Next.js, Redux, Chart.js, Leaflet, GraphQL, Tailwind CSS, Jest, A11y
- **Real-time**: WebSocket, WebRTC (LiveKit)
- **Telecom**: 5G Core (Open5GS, Druid Raemis), Private LTE/5G Networks, Network Monitoring
- **Back-end**: MySQL, MongoDB. Some experience with Node.js
- **Tooling**: Babel, webpack, ESLint, AI-assisted development

Education & Certification

Karadeniz Technical University — B.Sc. in Finance, Jun 2017
Certifications: Meta Front-End Developer · IBM Microservices · IBM Container · IBM CI/CD