

MUHAMMED SEMİH IRMAK

Frontend-Focused Software Engineer

React, Next.js, TypeScript | C# / ASP.NET Core & CI/CD

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PROFILE

Frontend-focused Software Engineer with 3 years of experience building and operating React, Next.js and TypeScript applications in FinTech/RegTech. Specialized in data-intensive, real-time interfaces using WebSocket/SignalR, TanStack Query/Table/Virtual and permission-driven UI patterns. Combines frontend engineering with C# / ASP.NET Core and Node.js/NestJS backend development, automated testing and production delivery, maintaining 5+ GitLab CI/CD pipelines and deployments for 15+ applications across Docker, Linux and IIS.

WORK EXPERIENCE

Frontend Developer, TRA Bilişim • Sakarya

Nov 2023 - Present

FinTech/RegTech software company delivering products for Tera Bank, Tera Yatırım, Tera Portföy, Tera Özel Güvenlik, Tera Finansal Yatırımlar Holding (TRHOL) and Tera Yatırım Teknoloji Holding (TEHOL).

- Build and maintain accessible React and Next.js applications for trading, portfolio, CRM and customer onboarding; collaborate with product designers and backend engineers and review junior developers' code.
- Build real-time interfaces for live orders, order books and tickers using WebSocket/SignalR; keep large datasets responsive with virtualization, memoization and TanStack Query caching.
- Modernize legacy React class-component and MVC frontends, migrating suitable modules to function-component architectures built with Vite, Next.js and the TanStack ecosystem.
- Implement and maintain 5+ GitLab CI/CD pipelines with Vitest/Playwright quality checks, SonarQube static analysis and Sentry monitoring.
- Manage production delivery for 15+ applications across container registries, Docker Compose, Linux and IIS; designed the company's first automated IIS deployment pipeline.
- Built and rolled out an internal issue-reporting platform across 6+ projects, reducing issue triage and diagnosis time by approximately 70% through structured navigation, console and network diagnostics.

R&D / Hardware Design Engineer, Linatek Elektronik Raylı Sistemler • Malatya

Jan 2022 - Jul 2023

Railway electronics manufacturer

- Designed, produced, tested and repaired electronic control boards and electrical control units used in railway locomotives, contributing to hardware prototyping, troubleshooting and production support.

SELECTED PROJECTS

Report Issue Platform | [npm](#) | [NuGet](#)

- Built reusable React and ASP.NET Core packages for issue reporting with privacy-aware screenshot annotation, browser-tab recording, console/network diagnostics, request correlation and KVKK/GDPR-aware consent flows; the frontend package is published to npm and the backend package ReportIssue.AspNetCore is published on NuGet.org.

Frontend Platform — TRA UI Kit & TRA UI Base | [Live UI Kit](#) | [UI Base Repository](#)

- Developed a reusable frontend platform combining a React/TypeScript component library with 30+ components, a Vite project template and a Node.js/TypeScript CLI. The foundation has been used to bootstrap 10+ internal projects, while the UI kit has been adopted across 5+ applications.

Tera Bank — Customer Onboarding & CRM Platform

- Owned the React UI end-to-end for Tera Bank's customer onboarding and CRM platform, covering customer data, user management, permission-based workflows and real-time state. Also contributed to ASP.NET Core backend features and integrations.

Tera Yatırım — Online Account Opening, CRM & Trading Automation

- Developed the React UI for online account opening and CRM workflows, including multi-step onboarding, document workflows and customer operations, while also contributing to .NET backend development. Built the frontend UI for TeraRobot's real-time trading and automation interfaces using SignalR-driven market and order updates.

Tera Özel Güvenlik — Security Operations Management Platform

- Owned the complete React UI for a security operations platform serving multiple companies covering shifts, attendance, patrols, reports, documents and user administration. Also implemented major parts of the Node.js/NestJS backend, enabling separate users, documents and operational workflows for each company.

Kairos Psychology & Child Development Platform | [Live](#)

- Built and launched a full-stack Next.js platform featuring dynamic specialist and service management, appointment scheduling, availability management, an admin CMS, RBAC/MFA, PostgreSQL with Drizzle ORM, Supabase, email workflows, SEO, Vitest and Playwright.

TECHNICAL SKILLS

Frontend & UI	React • Next.js • TypeScript • JavaScript • HTML5 • CSS3 • Vite • Tailwind CSS • shadcn/ui • Material UI • Accessibility (a11y)
Application & State	TanStack Query/Router/Table/Virtual • Zustand • Redux • React Context • Formik • Yup • i18n
Real-Time & APIs	WebSocket • SignalR • REST APIs • Axios • JWT Authentication • Refresh Tokens • Permission-Based Authorization • Permission-Based UI
Backend & Data	C# • ASP.NET Core • Entity Framework Core • SQL Server • PostgreSQL • Redis • Node.js • NestJS • Supabase • Drizzle ORM
Testing	Vitest • Playwright • React Testing Library
Delivery & Observability	Git • GitLab CI/CD • Docker • Docker Compose • Container Registry • Linux • IIS • SonarQube • Sentry

EDUCATION

B.Sc. in Electrical and Electronics Engineering, Sakarya University

Sep 2017 - Feb 2022

LANGUAGES

Turkish — Native speaker **English** — Intermediate