

# Emre YILDIZ

Software Architect and Engineering Lead

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## Summary

Experienced Software Architect and Engineering Lead with 7+ years developing enterprise-scale applications. Strong expertise in full-stack development, microservices architecture, blockchain technologies, and cloud platforms. Proven track record of leading technical teams, upgrading legacy systems, and delivering high-performance solutions for B2B e-commerce, fintech, and Web3 applications. Passionate about innovative technology solutions and continuous learning.

## Work Experience

<b>Software Engineer</b> <i>ChessDuello Software Technologies Corporation</i>	2025 – Present <i>Remote</i>
<ul style="list-style-type: none"><li>• Developed iOS/macOS chess application with SwiftUI featuring unique trivia-based gameplay mechanics</li><li>• Built Supabase backend with Deno 2 Edge Functions, Hono framework, and Drizzle ORM for PostgreSQL</li><li>• Implemented real-time multiplayer system with WebSocket channels for live match synchronization</li><li>• Designed complex match system with 8-phase architecture including AI bots and tournament support</li><li>• Created comprehensive API layer with offline queue, automatic retry logic, and response caching</li></ul>	
<b>Founder and Software Engineer</b> <i>Medivizi</i>	2025 – Present <i>Remote</i>
<ul style="list-style-type: none"><li>• Architected multi-tenant Occupational Health and Safety (OHS) backend system using Rust with Axum framework</li><li>• Implemented Row-Level Security (RLS) for tenant isolation with PostgreSQL and SQLx compile-time checked queries</li><li>• Built real-time features with WebSocket support and S3-compatible storage using Garage</li><li>• Developed admin dashboard with HTMX, Askama templates, and TailwindCSS for seamless user experience</li><li>• Designed comprehensive database schema for appointments, training management, and safety compliance tracking</li></ul>	
<b>Tech Lead</b> <i>BergX Software</i>	2023 – 2024 <i>Remote</i>
<ul style="list-style-type: none"><li>• Led technical decisions and architecture design for multiple projects</li><li>• Mentored team members and conducted code reviews</li><li>• Managed project timelines and technical deliverables</li><li>• Built <b>jrkrpto.com</b> crypto news, analysis, and education platform with <b>Next.js</b> frontend and <b>NestJS</b> microservices backend</li><li>• Implemented event-driven architecture with <b>Kafka</b>; leveraged <b>Redis</b> Pub/Sub and caching for real-time updates</li><li>• Designed <b>MySQL</b> with read replicas and optimized data access patterns for high throughput</li><li>• Scaled infrastructure with load balancing and horizontal service replicas to support <b>20,000+ active users</b></li><li>• Developed cross-platform mobile app with <b>React Native (Expo)</b> for iOS and Android</li><li>• Established centralized logging and monitoring with the <b>ELK</b> stack (Elasticsearch, Logstash, Kibana)</li><li>• Built DeFi dApps and a swap platform with <b>Next.js</b> and <b>Remix</b>, targeting Ethereum, zkSync Era, Arbitrum, Sui, Solana, and Aptos</li><li>• Authored and deployed smart contracts for staking, multisender, swap, token factory, vesting, and token lock using <b>Solidity</b>, <b>Move</b>, and <b>Rust</b></li><li>• Implemented CEX/DEX trading bots with <b>Bun</b> and <b>TypeScript</b> for volume making, balance arbitrage, and market making</li><li>• Achieved significant exchange traction; one project reached <b>\$25M+</b> trading volume on MEXC</li></ul>	
<b>Software Engineer</b> <i>Gunkom Software</i>	2021 – 2023 <i>Remote</i>

- Developed **Flutter** iOS & Android application for **Magmaweld (Zaimoglu Holding)** with **.NET 6** backend; platform connecting customers with welding masters
- Built B2B e-commerce application with **Angular** frontend and **ABP .NET** backend for Altinyildiz Classics Business; processed **10,000** products in instant operations
- Supported workflow management platform for **Yasar Holding**; delivered **48** new features and **28** bug fixes; handled **65,000** workflows per year using **ASP.NET MVC, JavaScript, jQuery**
- Enhanced **Swift UIKit** iPad application integrated with **.NET** backend for a Germany-based natural materials apparel company
- Developed **Java** Android NFC payment app for **BR Store** with **3D Secure** gateway for B2B customers
- Upgraded company core boilerplate framework from **.NET Core 3.1** to **.NET 6.0**; developed automation scripts that improved new-project development speed by **5%** (as reported by other developers)

**Senior Software Engineer**  
*Freelance / Contract*

2017 – Present  
*Remote*

- Built **Chess Management Software** with **Angular** and **.NET**; used by chess club players for puzzle solving, rating improvement, analytics, and education with videos and documentation

## Education

<b>Ege University</b> <i>Master of Science in Computer Engineering; Concentration: Distributed Systems</i>	Izmir, Turkey 2024 – 2026
<b>Celal Bayar University</b> <i>Bachelor of Science in Computer Engineering; GPA: 3.32/4.00</i>	Manisa, Turkey 2020 – 2024
<b>Ahmet Yassawi University</b> <i>Bachelor of Science in Computer Engineering; GPA: 3.81/4.00</i>	Turkestan, Kazakhstan 2019 – 2022
<b>Dokuz Eylul University</b> <i>Associate's Degree in Computer Programming; GPA: 3.40/4.00</i>	Izmir, Turkey 2016 – 2018

## Technical Skills

- Languages:**
  - C#, TypeScript, JavaScript, Python, Java, Rust, Solidity, Swift, Dart, SQL, Bash
- Backend:**
  - .NET Core, ASP.NET, Entity Framework, NestJS, Express, Django, FastAPI, Spring Boot, Axum
- Frontend:**
  - Angular, React, NextJS, Remix-run, Redux, React Query, Tailwind CSS, Material-UI
- Mobile:**
  - Flutter, React Native, Android (Java), iOS (Swift/UIKit)
- Blockchain:**
  - Ethereum, Solidity, Web3.js, Hardhat, Foundry, ZkSync, Arbitrum, Aptos, Sui
- Databases:**
  - PostgreSQL, MySQL, MSSQL, Redis, MongoDB, CouchDB
- Cloud/DevOps:**
  - AWS, Docker, Kubernetes, CI/CD, Linux, Nginx, HAProxy, Git, GitHub Actions
- Architecture:**
  - Microservices, REST API, GraphQL, gRPC, RabbitMQ, Kafka, Event-Driven Design
- AI/ML:**
  - LangChain, Pydantic AI, pgvector, n8n, MCP Protocol, TensorFlow, PyTorch
- Tools:**
  - Agile/Scrum, Jira, Confluence, Selenium, Puppeteer, Postman, VS Code, IntelliJ IDEA

## Projects

- ChessDuello - Multiplayer Chess Game**  
2025 | *SwiftUI, Supabase, Deno 2, PostgreSQL, WebSocket*
  - Built iOS/macOS chess application with innovative trivia-based move unlock system
  - Implemented real-time multiplayer matches with 3-minute rounds and 24-hour response windows

- Developed comprehensive backend with Edge Functions, service layer pattern, and Row-Level Security

## **Medivizi - OHS Management Platform**

2025 | *Rust, Axum, PostgreSQL, HTMX, WebSocket*

- Architected multi-tenant SaaS platform for Occupational Health and Safety management
- Built with compile-time SQL verification using SQLx and comprehensive RLS policies
- Integrated real-time features for appointments, training sessions, and safety compliance tracking

## **Blockchain Web3 Application**

2023 | *NextJS, NestJS, MySQL, Solidity, Web3.js*

- Developed full-stack Web3 application for token transactions and market bot management
- Implemented smart contracts on Ethereum, ZkSync, and Arbitrum networks
- Built real-time market analysis features with automated trading capabilities

## **jrkrpto.com - Crypto News & Education Platform**

2023–2024 | *Next.js, NestJS, MySQL (replicas), Redis Pub/Sub, Kafka, ELK, React Native (Expo)*

- Built crypto news, analysis, and education platform with Next.js frontend and NestJS microservices backend
- Implemented event-driven microservices with Kafka; used Redis Pub/Sub and caching for real-time updates
- Designed MySQL with read replicas; scaled with load balancing and horizontal replicas to 20,000+ active users
- Centralized logging and monitoring with ELK; delivered mobile app with React Native (Expo)

## **DeFi dApps & Swap Platform**

2023 | *Next.js, Remix, Solidity, Move, Rust, Bun, TypeScript*

- Developed dApps and swap platform across Ethereum, zkSync Era, Arbitrum, Solana, Sui, and Aptos
- Authored contracts for staking, multisender, swap, token factory, vesting, and token lock
- Built CEX/DEX trading bots (Bun + TypeScript) for volume making, balance arbitrage, and market making; one project hit \$25M+ volume on MEXC

## **Enterprise Workflow Management System**

2022 | *.NET Core, Angular, PostgreSQL, REST API*

- Supported enterprise workflow system processing 65,000+ workflows for multiple companies
- Implemented REST API endpoints for workflow initialization and management
- Organized version control system and implemented new features with bug fixes

## **Chess Course Management System**

2021 | *C#, .NET Core, MSSQL, Entity Framework*

- Built comprehensive web application for student progress tracking and attendance management
- Implemented chess puzzle homework submission and automated grading system
- Designed database schema for efficient data retrieval and reporting