

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

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

2017 – Present

Freelance / Contract

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
- Developed web scraping and analytics system for an AI analytics company; fetched laptop data from multiple e-commerce sites and analyzed it with a **FastAPI Python** backend
- Developed **Django Python** backend web application for a gym

Education

Ege University

Izmir, Turkey

Master of Science in Computer Engineering; Concentration: Distributed Systems

2024 – 2026

Celal Bayar University

Manisa, Turkey

Bachelor of Science in Computer Engineering; GPA: 3.32/4.00

2020 – 2024

Ahmet Yassawi University

Turkestan, Kazakhstan

Bachelor of Science in Computer Engineering; GPA: 3.81/4.00

2019 – 2022

Dokuz Eylul University

Izmir, Turkey

Associate's Degree in Computer Programming; GPA: 3.40/4.00

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