

Mohammad Zafardoost

Senior Backend Engineer | Distributed Systems | Fintech Infrastructure

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PROFILE

Backend and distributed-systems engineer with 10+ years across software engineering and infrastructure, building systems where correctness, security, and uptime directly affect customer money. Led a 10-person team from an empty repository to three production fintech platforms holding live custody of customer assets, owning architecture, the highest-risk services, and production infrastructure end to end. Strongest in the expensive parts of a system: authentication, money movement, custody, concurrency, distributed state, and failure handling.

TECHNICAL SKILLS

Languages	TypeScript, JavaScript · working knowledge: C#, Java
Architecture	Distributed systems, event-driven design,DDD & Clean Architecture, microservices, SOA, API gateways, real-time systems
Data	PostgreSQL, MongoDB, Redis, MySQL, replication & sharding, data modelling, object storage
Messaging	RabbitMQ, MQTT, WebSocket, GraphQL, REST
Infrastructure	Docker, Kubernetes, GitLab CI/CD, Nginx, Linux, HashiCorp Vault, CDN, monitoring
Blockchain	Ethereum, BSC, Bitcoin, Tron, Web3, custody & multi-sig, smart wallets, trade engines
AI	LLM API integration, OpenAI, prompt design, structured outputs, AI-assisted workflows

EXPERIENCE

Technical Lead

Jun 2024 – Aug 2026

Dana Blockchain Solutions

- Most senior technical role, reporting to the CEO. Owned architecture, delivery, and infrastructure for three production fintech platforms built from zero — **BitBaax** (crypto exchange), **TetherBaax** (Tether wallet & OTC), and **Goldmim** (physical & digital gold trading) — all handling live custody of customer assets.
- Led a **10-person team** across backend, frontend, and QA: set technical direction and engineering standards, reviewed high-risk designs and production changes, and owned infrastructure, CI/CD, and production operations end to end.
- Architected a reusable exchange core — ~26 domain-oriented modules on Clean Architecture and DDD over an event-driven layer (RabbitMQ, MQTT, WebSocket), backed by replicated MongoDB and Redis. TetherBaax later launched on that core with only its own business logic added.
- Personally built the highest-risk services: auth, trade engine, wallet management, treasury, and blockchain interaction. Rewrote the matching engine's numeric core in **C++ and Go** after hitting JavaScript floating-point precision limits.
- Built multi-chain deposit and withdrawal infrastructure across Ethereum, BSC, Bitcoin, and Tron, indexing and monitoring **~25M mainnet transactions daily**; load-tested the internal ingestion pipeline at **40k events/sec**.
- Built and operated the full GitLab CI pipeline (lint, unit, E2E, security scanning, deploy), cutting failure rate from **~40% to 15%** across 950 runs, and added AI-assisted pre-review to shorten review cycles.

Freelance Full-Stack Engineer

Oct 2019 – Present

Self-employed · Remote

- Co-founded **FitYar**, an AI fitness and nutrition coaching app, owning backend, infrastructure, and AI integration alongside one frontend engineer while leading engineering at Dana.
- Deliver production platforms end to end as sole engineer across fintech, logistics, telecom, and e-commerce — a digital-goods marketplace with automated fulfilment, an international freight and customs platform, a fiber-optic subscription system for a telecom operator, and the payment and subscription layer behind a mobile app with **1M+ active users**.
- Own the full operational layer — containerized environments, CI/CD pipelines, network and TLS hardening, secrets management, and monitoring — and maintain delivered systems years post-launch without rewrites or regressions.

Senior Backend Engineer

Jun 2021 – Jun 2024

Part Software Group

- Designed and implemented the **company-wide API Gateway** in pure Node.js — authorization, access control, rate limiting, caching, and compression — with an extensible middleware layer allowing custom logic to be injected anywhere in the request pipeline.
- Backend engineer and solution architect on **Shahab**, Part AI Research Center's intelligent cloud-network platform; built the AI model marketplace, container management, wallet, and payment services.
- Conducted **250+ technical interviews** and helped leadership standardize technical assessment; taught backend and Node.js to ~100 engineers across 4 cohorts at Part College, with 25 graduates hired into the company.

Backend Developer

May 2019 – Jun 2021

Zarban Information Technology Solutions · Remote · Ontario, Canada

- Built backend systems for web and mobile products delivered to international clients in the Toronto market — multi-role marketplace infrastructure, a global peer-to-peer currency exchange, and a music rights and distribution platform.
- Designed SQL and NoSQL data models and implemented real-time socket features; moved into a technical advisory role in the final months, coaching the in-house team on backend architecture and system design.

Backend Developer (Part-time)

Nov 2020 – Mar 2021

i4Twins – Industry 4.0 Solutions · Remote

- Built Node.js microservices for an IoT platform covering device connectivity, sensor data collection, aggregation, and visualization; carried the platform to ~90% completion before development paused pending the company's funding round.

IT Security Specialist

Feb 2016 – May 2019

Faragaman Saya Ertebat Novin

- Delivered network infrastructure and security projects for private-sector and government organizations — firewalls, IDS/IPS, and endpoint protection across enterprise and industrial environments (MikroTik, Fortinet, Kaspersky KATA). This grounding still shapes how I approach custody, secrets management, and threat modelling.

SELECTED PROJECTS

Extended write-ups, architecture notes, and screenshots: mohammadzafardoost.com

BitBaax · Centralized cryptocurrency exchange — Technical Lead

2024 – 2026

Built the automated trading subsystem (market maker, hedging, price and index bots) and the real-time market data layer — order book, price feeds, OHLCV aggregation, and charting streamed over WebSocket with sub-second propagation. Designed the exchange core to support multiple financial products without platform forks. Applied account abstraction, smart wallets, and batched transactions across four chains to cut gas costs. A two-month architecture and R&D phase producing ~50 design documents kept the 12-month build within 15% of plan.

Stack: Node.js · TypeScript · C++ · MongoDB · PostgreSQL · Redis · RabbitMQ · MQTT · WebSocket · Docker · GitLab CI

Goldmim · Physical & digital gold trading platform — Technical Lead

2025 – 2026

Users buy at live global spot prices and either hold a digital gold balance for trading or take physical delivery. Built the full fulfilment layer bridging digital holdings and physical assets — branch network inventory, delivery routing, identity verification at handover, and dedicated secure logistics — priced against the global gold index with live charting.

Stack: Node.js · TypeScript · PostgreSQL · MongoDB · Redis · RabbitMQ · WebSocket · Docker

FitYar · AI fitness & nutrition coaching app — Co-Founder

2026 – Present

AI fitness and nutrition coaching app built on GPT models — conversational coaching, personalized training experiences, calorie and macro tracking, and a 400+ exercise library. Designed the GPT integration layer including conversation flow, system prompts, and structured output handling.

Stack: Node.js · TypeScript · MongoDB · Redis · WebSocket · Docker · OpenAI API

WonderGift · Digital goods marketplace — Full-Stack Engineer

2025 – 2026

Marketplace for gift cards, subscriptions, games, and apps with instant automated delivery across global providers, built with secure payment handling and subscription lifecycle management.

Stack: Node.js · Next.js · MongoDB · Redis · RabbitMQ · Docker · Kubernetes

Zoodikara · Employer administration & legal platform — Full-Stack Engineer

2025 – 2026

Platform for employers managing social-security obligations entirely online, replacing in-person visits with digital case handling, document archiving, real-time process status, and multi-company access.

Stack: Node.js · React.js · MongoDB · PostgreSQL · Redis · Docker · Kubernetes

CRMTell · Fiber-optic service management platform — Full-Stack Engineer

2024 – 2025

End-to-end automation of fiber subscription workflows for a telecom operator, from online application and eligibility validation through resource allocation, installation, and activation, with a subscriber portal and operator dashboard.

Stack: Node.js · React · MongoDB · Redis

EDUCATION & CERTIFICATIONS

BSc, Information Technology — Kharazmi University

Mar 2022

Certifications

Certified Ethical Hacker (CEH) · Cisco CCNA · Microsoft MCSA · Kaspersky Certified Consultant · Kaspersky Anti Targeted Attack Platform · Bitdefender Certified Technical Specialist · Certificate of Faculty Membership, Part Software Group (2023)

Training

MongoDB University — M001, M103 Cluster Administration, M121 Aggregation, M201 Performance, M320 Data Modeling · Master Node.js (MVC, REST APIs, GraphQL) · C# Programming

Languages

English — professional working proficiency