

Profile

Head of Software & System Architect with an **M.Sc. in System Design** from Amirkabir University of Technology. Expert in bridging hardware-level efficiency with cloud-scale architecture. Proven track record in leading cross-functional teams, optimizing Linux kernels, and architecting hybrid WebRTC/HLS infrastructures for high-concurrency Fintech and Media platforms.

Professional Experience

- 07/2025 – 11/2025 **Solutions Architect (Project Contract)**, *HonarAmoozesh*, Remote
- **Hybrid Streaming Architecture:** Architected production-grade dual-stream **WebRTC (LiveKit) + HLS** system serving 1,200+ concurrent users while reducing infrastructure costs by **78%**. Designed intelligent fallback mechanisms for varying network conditions.
 - **Real-Time Signaling:** Engineered **sub-100ms signaling latency** using **NATS JetStream** for seamless user role promotion and dynamic room management. Deployed scalable LiveKit SFU clusters with HAProxy load balancing and Prometheus monitoring.
- 10/2023 – 06/2025 **Head of Software & AI Development**, *Capitalino (CITEX Spin-off)*, Tehran
- **AI Innovation Leadership:** Led the **AI Hologram Project**, winning **Best Booth at ITEX 2024**. Architected real-time AI-driven interactive displays integrating computer vision, NLP, and holographic projection systems.
 - **Digital Investment Platform:** Architected and deployed the **Digital Investment Management Dashboard** with real-time portfolio analytics, risk assessment algorithms, automated rebalancing, and blockchain API integration for crypto asset tracking.
 - **OTC Exchange Platform:** Designed high-throughput **OTC Exchange Platform** processing **\$2M+ monthly volume** with **99.9% uptime** using **Docker Swarm** orchestration and Redis-backed rate limiting for Crypto-to-Fiat transactions.
 - **ERP System & Team Leadership:** Led customization and deployment of enterprise **ERP system** (Odoo) integrating financial workflows and CRM modules. Built and managed 4-person engineering team with **Agile/Scrum** workflows via self-hosted **GitLab CI/CD** and **Jira**.
 - **Infrastructure & Security:** Oversaw network architecture, server security hardening, and disaster recovery protocols. Designed hybrid cloud infrastructure with centralized logging (ELK), monitoring (Prometheus/Grafana), and automated backups.
- 04/2021 – 09/2023 **Senior Backend Engineer**, *Avin Avisia*, Tehran
- Post-Master's role focused on high-performance algorithmic trading engines for cryptocurrency markets.*
- **High-Frequency Matching Engine:** Architected **sub-100ms P2P matching engine** utilizing **Greedy Knapsack algorithms** for optimal trade execution. Implemented in-memory order matching with persistent snapshot recovery.
 - **Financial Integrity:** Designed **ACID-compliant transactional ledgers** using PostgreSQL with row-level locking. Integrated **Web3.js** for on-chain verification and blockchain wallet management.
 - **Performance Optimization:** Reduced API response times by **60%** through Redis caching and database optimization. Achieved 10,000+ requests/second throughput.
- 09/2019 – 03/2021 **Systems Engineer (Embedded Linux)**, *Batna*, Tehran
- Concurrent with M.Sc. studies; specialized in low-level Linux optimization for IoT edge devices.*
- **Kernel Optimization:** Modified Linux kernel drivers and boot sequences using **systemd** parallelization, reducing system initialization time by **40%** on ARM-based hardware.
 - **OTA Update Pipeline:** Designed **atomic OTA firmware update pipeline** for 5,000+ IoT devices using dual A/B partitions, rollback mechanisms, and delta patching with secure HTTPS delivery.
 - **Build Systems:** Developed custom Yocto/Buildroot distributions for resource-constrained targets. Integrated cross-compilation toolchains and CI/CD pipelines for firmware releases.

- 04/2016 – **Android Systems Developer**, *Azma Data Structure*, Mashhad
- 08/2019
- **Native Performance:** Developed native modules using **Android NDK (C++)** for GPS tracking, achieving **sub-meter accuracy** and 50% battery reduction through sensor fusion.
 - **Offline-First Architecture:** Engineered fragment-based state synchronization with conflict resolution using **Operational Transformation** and background sync queues.
 - **Enterprise Apps:** Built scalable Android apps serving 10,000+ users with biometric authentication, encrypted storage (SQLCipher), and real-time sync via FCM.

Education

- 2018 – 2021 **M.Sc. in Computer Science (System Design)**, *Amirkabir University of Technology*, Tehran
Tehran Polytechnic – Iran's #1 ranked university in Computer Science.
- **Thesis:** "GreedyLearner" – A gamified algorithm learning platform with adaptive learning paths and real-time code evaluation (Node.js, React, PostgreSQL, Docker).
 - **Blockchain Committee Lead:** Designed decentralized reward systems using **Hyperledger Sawtooth** with custom transaction processors for academic credit tokenization.
 - **Academic Excellence:** GPA 3.8/4.0. Coursework: Advanced Algorithms, Distributed Systems, Cloud Computing, AI/ML.
- 2012 – 2017 **B.Sc. in Computer Science**, *University of Bojnurd*, Bojnurd
- **Teaching Assistant:** Selected as TA for **Data Structures**, **Advanced Algorithms**, and **Operating Systems** across multiple semesters. Mentored 100+ students.
 - **Core Focus:** Operating Systems Internals, Database Design, Network Protocols (TCP/IP), Compiler Design, Software Engineering.
 - **Capstone:** Developed distributed file storage system with redundancy using Java RMI. Achieved 99% uptime in stress testing.

Technical Skills

- Architecture Microservices, Event-Driven Systems, DDD, CQRS, API Gateway, Service Mesh, Distributed Systems, High-Availability, Load Balancing
- Backend Node.js (Expert), TypeScript, Java, C++, Python, Go, RESTful/GraphQL APIs, WebSocket, gRPC, Message Queues (NATS, RabbitMQ, Kafka)
- Databases PostgreSQL (Advanced), Redis (Caching, Pub/Sub), MongoDB, Elasticsearch, Sharding, Query Optimization, Replication
- DevOps Docker Swarm, Kubernetes, CI/CD (GitLab CI, Jenkins), IaC (Ansible, Terraform), Monitoring (Prometheus, Grafana, ELK), Linux Admin
- Specialized WebRTC (LiveKit), HLS Streaming, Linux Kernel Customization, Embedded Systems (Yocto), Blockchain (Hyperledger, Web3.js), AI/ML Ops

Languages & Certifications

- Languages **English:** IELTS 7.5 (Professional Proficiency) | **French:** B2 (Professional Working Proficiency) | **Persian:** Native
- Certifications Introduction to TensorFlow for Artificial Intelligence (Coursera) | Agile & Scrum Methodologies | Hyperledger Sawtooth Architecture (Research)
- References **Official Letter of Recommendation** from Capitalino CEO