

Mahdi Akbari Zarkesh

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6+ Years Production Engineering · 10K+ RPS Architected · 51M+ Users Served · 3 Published Papers

SUMMARY

Hands-on technical lead and architect who designs, codes, and ships agentic AI systems end to end, holding **full decision authority** on migration strategy, scalability, and integration. Five-plus years owning production backend systems (Python, Go, distributed systems, Kubernetes), including architecting services running **10,000+ RPS** for **51M+** users; the last year as **architecture owner** for a production AI agent: memory, RAG, multi-agent orchestration, prompt and context engineering, and the **eval gate** that says when an agent change is done on production. Pairs that technical depth with **product and business judgment**: big-picture systems thinking, structured problem-solving, KPI/OKR-driven decisions, and the product decision on what to build next. Communicates architecture and trade-offs in plain language across engineering, product, and leadership, and drives cross-functional teams from decision to shipped delivery; the pattern across every role is making the whole team faster. Still writes the core services and is still the one on call when something breaks. Also open to advisory/consulting engagements on AI integration.

CORE SKILLS

- **AI & Agent Systems:** Agentic AI, AI Agents, Multi-Agent Systems, LLM Orchestration, RAG, Vector Databases, Prompt & Context Engineering, Agent Evals & Error Analysis, Coding Agents, LangGraph
- **Backend & Distributed Systems:** Python, Go, gRPC, Distributed Systems, Microservices, System Architecture, Kafka
- **Cloud & DevOps:** Kubernetes, Docker, CI/CD, AWS, Google Cloud, FastAPI / Django
- **Product & Business:** Product Strategy, Prioritization by Business Impact, KPI/OKR-Driven Decisions, Systems Thinking, Structured Problem-Solving
- **Leadership & Communication:** Technical Leadership, Team Building (**2 to 11**), Onboarding & Coaching, Stakeholder Communication & Technical Storytelling, Cross-Functional Delivery, Technical Interviewing & Hiring, AI Integration Advisory

EXPERIENCE

Technical Product Manager, AI (Technical Lead, Agent Platform)

Alien Intellect · Jul 2025 – Present · UAE (Remote)

- Took the company's AI agent from **concept to private beta**, owning product direction and architecture, in small measured steps: each release changed one thing, was checked against evals and beta-user feedback, and set the next step.
- Led the migration of the production agent from **five separate contexts** to **one unified architecture**, and shipped its persistent per-user memory and a **RAG pipeline** that answers from a user's own documents with real citations.
- Built the **AI guardrails** that keep the user-facing agent out of its own prompts, source code and infrastructure.
- Extended the agent's **tool calling** with **multimodal generation** (image and video) and **live status**, so users see the plan and each step as it happens. Stack: Python, LangGraph, Claude Agent SDK, Kubernetes on AWS.
- Own **prompt and context engineering**, the **eval suite** (LLM-as-judge plus regression cases) that gates every agent change, and the **Definition of Done**: finished means running on production with eval evidence.
- Own the **product direction** alongside the architecture: roadmap, prioritization and sprint cadence, grounded in KPIs and beta-user feedback.
- Grew the engineering team from **2 to 11 people** in a year: wrote the **hiring rubric** and the two-stage interview flow, interviewed and evaluated every candidate, and set each hire's level.
- Own **onboarding and coaching**: every joiner gets a buddy, a first-week plan, an architecture session and a first scoped ticket by the end of week one, then weekly **1:1s** and pairing that work on how they reason, not only what they know.
- Built the team's **working culture from zero**: sprint cadence, Definition of Done, QA flow and release process, so a young product with no full spec still ships on a fixed rhythm under real ambiguity.

- Kept the team shipping through the **summer 2026 war weeks** in Iran: made office attendance optional, replanned around power and connectivity outages, kept the daily as the one fixed point, and still landed the July beta on its date.

Software Engineer

Cafe Bazaar · Sep 2020 – Aug 2025 · Tehran (On-site) · 5 yrs

- Architected **Bazaar's update service**, on the critical path of every request from **51M+** users: **10,000+** RPS at peak over a **46GB** dataset with sub-**70ms p99** response times, cutting average response time **65%** while maintaining **99.9%** uptime, via horizontal scaling on Kubernetes, Redis caching, and gRPC.
- Scaled Bazaar's **user-registration service** on a ~**1TB** PostgreSQL database through customized indexing and caching strategies.
- Led the **Python-to-Go migration** strategy across **15+** critical services with zero downtime, cutting memory usage **75%** and improving response times **80%**.
- Drove a **microservices consolidation** initiative that cut service count **40%**, inter-service network calls **60%**, CI/CD time **50%**, and infrastructure costs **30%**.
- Owned architecture and reliability for a **payment/wallet platform** serving **51M+** users at a **99.99%** transaction success rate with zero critical security incidents.
- Championed a "**complete ownership**" engineering culture: pushed deployment frequency from monthly to daily and cut MTTR **70%**.
- Drove **LLM adoption** at Cafe Bazaar earlier than most of the industry: cut user-review response time from ~**2** days to under **15** minutes (**192x**) using LLMs, and rolled out **coding agents (Claude Code)** across the engineering org, lifting developer productivity **30-40%**.
- Represented Cafe Bazaar as an **instructor for Quera's software engineering bootcamps**, teaching Go and Python to working engineers.

Software Engineer

Ferdowsi Cloud · Oct 2019 – Sep 2020 · Mashhad · 1 yr

- Built **RESTful APIs in Django** integrating with **OpenStack** for a cloud infrastructure product.
- Developed **Python monitoring services** for cloud-based infrastructure.

Business & Technical Consultant / Startup Advisor & Coach

Freelance (Part-Time) · Apr 2023 – Present

- Advises **2-3 early-stage startups** (AI-driven insurance assistant, CRM automation, organizational tooling) on technical and product decisions, part-time alongside full-time roles.

EDUCATION

M.Sc., Computer Engineering – Sharif University of Technology, 2021–2023 (GPA 3.7)

Thesis: Improving Security and Integrity of Healthcare Data Using Blockchain (Grade: A)

B.Sc., Computer Engineering – Ferdowsi University of Mashhad, 2017–2021 (GPA 3.9, ranked 1st of 200)

Thesis: Achieving Scalability and Reliability in Kubernetes – Node Autoscaling and Application-Level Fault Tolerance · Member, Iran's National Elite Foundation (2018–2020)

PUBLICATIONS

- Blockchain-Based IoT Framework with In-Depth Security Analysis and Performance Benchmarks for Real-World Healthcare Fog Applications – **Scientia Iranica**, Transactions D, **2025**.
- EdgeLinker: Practical Blockchain-Based Framework for Healthcare Fog Applications to Enhance Security in Edge-IoT Data Communications – **IEEE CPSAT 2024** (first author).
- Energy-Aware Workflow Scheduling in Fog Computing Using a Hybrid Chaotic Algorithm – **The Journal of Supercomputing** (Springer), **2023**.

SELECTED TALKS & WRITING

- "Challenges in Developing Bazaar's Update Service" – **Sharif University Job Fair**, Nov **2024**. How a **10,000+** RPS critical-path service is built and kept fast.
- Engineering writing – posts on production LLM adoption and high-throughput system design; most-read post (a Redis latency trade-off story) reached **6,500+ readers**.

CERTIFICATIONS & LANGUAGES

Certified Ethical Hacker (CEH) – Maktabkhooneh, 2020 · **Product Management** – Bozhan School, 2022 · **Google Cloud Infrastructure** (4 certs) – Google Cloud Education, 2020–2022 · **Languages:** English (professional), Persian (native)