

Mohammad Javad **Hoseini**

SOFTWARE / SITE RELIABILITY ENGINEER

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"Hope is not a strategy"

Experience

ArvanCloud

Tehran - Remote

SOFTWARE ENGINEER (CONTRACT)

Nov 2025 - May 2026

- Architected and developed a **Scalable, Event-driven, MVCS** REST API with **FastAPI** and **gRPC communications**; the MAV (Multi-Antivirus, like VirusTotal) system parallelizes file scans across **6 engines** (ESET, Kaspersky, ClamAV, Dr.Web, Padvis, YARA), scanning files ≤ 10 MB in **~2.75 s** on average and sustaining **~1.9M scans/day**.
- Integrated **YARA rules** for custom malware pattern matching, enhancing the platform's threat detection capabilities.
- Built a multiprocess service layer (**Async and Multithreaded pools**) to overcome the Python GIL under high scan and download loads.
- Developed a **WRR (Weighted Round Robin)** scheduler to split ingress load across different deployments.
- Leveraged **Message Brokers (RabbitMQ/Kafka + Schema Registry)** to decouple file ingestion from scanning services, ensuring system resilience during high-traffic bursts.
- Inter-service communication (IPC) based on **gRPC and Protobuf** for the whole scan cycle and monitoring sub-service heartbeats, reducing terabyte-scale Kafka topics by **~90%** to **150 GB**.
- Containerized antivirus engines to run **unlimited scanner instances per single-seat license**, horizontally scaling petabyte, cloud-scale scanning without per-instance licensing cost.

OutFlow (Startup)

Khorasan Razavi, Mashhad

SOFTWARE ENGINEER / TEAM LEAD

Jan 2025 - Nov 2025

- Validated core product-market fit by conducting a **2-month pilot program** with a target user group; used feedback loops to increase individual learning velocity and refine platform requirements.
- Led a **3-member engineering team**, establishing a scrum-lite framework with bi-weekly syncs to unblock development and maintain project velocity.
- Architected a high-performance **MVCS REST API** using **FastAPI** and **Neo4j**, implementing **JWT authentication / session management, TOTP** and a graph-based data model to handle complex learning-path relationships.
- Developed the frontend with **Vue.js, D3.js, Typescript, Pinia**, and CSS (Flex, Grid and Sass).
- Presented the OutFlow concept to potential investors.

ArvanCloud

SITE RELIABILITY ENGINEER

Tehran - Hybrid

June 2022 - Dec 2024

MIDDLEWARE TEAM (Nov 2023 - Dec 2024)

- Implemented Chaos Engineering practices using **Chaos Mesh** to orchestrate fault injection experiments (network latency, pod failures, and I/O stress), identifying and remediating single points of failure in service inter-dependencies.
- Engineered a global latency monitoring system with **Python/FastAPI** to track API response times across 45+ cities in 28 countries, reducing tail latencies.
- Wrote custom **Ansible** modules that replaced a planned **KMS** and its per-service integrations, cutting a **1-2 month** effort to **2 weeks**; they generate random credentials and rotate passwords across all **18 database instances** (8 MongoDB, 8 Redis, 1 ClickHouse, 1 CockroachDB) for the whole **7-person team in under 5 minutes**.
- Ran **8 Game Day** exercises across critical notification, payment, and authentication services; the resulting postmortems drove **13 new alerting rules** and **5 new dashboards**.
- Modernized legacy incident documentation, rewriting obsolete technical guides into actionable, **SRE-focused runbooks**.
- Enhanced database lifecycle management by **implementing encryption, automated monitoring, and alerting** for backup/restore workflows.
- Developed a Pythonic specialized proxy/API checker** to monitor and alert on the health of critical external dependencies (Payment gateways, Mail providers, etc.).

OBJECT STORAGE TEAM (JUNE 2022 - Nov 2023)

- Automated Ceph cluster operations by **Pythonic Ansible** modules across **90+ servers**, **reducing human error** and eliminating partial service outages during maintenance.
- Architected a metadata synchronization pipeline** between a **~5 PB** Ceph cluster and **Elasticsearch** to enable advanced user analytics and Multi-AV services.
- Designed comprehensive observability dashboards and log aggregation pipelines using **Elasticsearch** to analyze user access patterns and file metadata.
- Designed and managed a **4-SRE 24/7 on-call rotation** for all interface services, handling **1-2 incidents/month** at a **~4 hr MTTR** (minor incidents).
- Automated** backup workflows for **MongoDB** and **ClickHouse** databases to ensure data durability and rapid recovery.
- Paired with developers to review infra service code to improve speed and security.
- Spearheaded the engineering **on-boarding program**, designing technical training plans to accelerate the integration of new teammates into the SRE team.
- Set up a proxy/private **container registry (Nexus)** and **development-environment (code server and dev dependencies)** to streamline the CI/CD pipeline and improve the developer experience (DX).
- Standardized staging environments by developing **Infrastructure as Code (IaC)** using **Ansible**, ensuring parity between dev and production.

DigiEdge - On site

DEVOPS ENGINEER

Khorasan Razavi, Mashhad

Sep 2021 - Mar 2022

- Created CI/CD pipelines for Android and iOS developers with **Microsoft Azure**.
- Developed a customized **MTPROTO** proxy server in **Javascript** with per-user limits on time, data usage, and connection count.
- Automated database backups for **MySQL** and **Redis**.
- Deployed a mail server (Mailu) with a customized panel and spam detection.
- Built an attendance system in an **event-driven architecture** with **Kubernetes**.

Milogy - On site

SOFTWARE ENGINEER (APPRENTICESHIP)

Khorasan Razavi, Mashhad

Apr 2021 - Sep 2021

- Developed **Node.js / Express.js** APIs for personality-typology tests such as MBTI.
- Implemented **RBAC, OAuth, and JWT** mechanisms on a financial API.

Skills

Programming Python, Javascript/Typescript, Lua, Bash

Web & Frameworks	HAProxy, FastAPI, Flask, Express.js
Databases	MongoDB, Redis, Elasticsearch, Memgraph, Neo4j, Clickhouse, CockroachDB, MySQL
Cloud & Orchestration	Kubernetes, Helm, Docker Swarm, Ansible, Terraform, Vault
CI/CD & Observability	Git/GitLab, Jaeger, Sentry, Prometheus, Grafana
Stream/Message brokers	Kafka, RabbitMQ
Networking & OS	Hands-on: Debian-based Linux (LPIC-2), TCP/IP, VRRP, iptables, Tunneling. Theory/Lab: BSD, BGP, MPLS.
Systems Internals & Security (Hands-on/Lab)	eBPF (Aya/Tetragon), LSM (AppArmor, SELinux), OPA
Languages	Persian (Native), English (Intermediate)

Education

Sajad University of Technology

B.S. IN COMPUTER ENGINEERING

Razavi Khorasan, Mashhad

Jan. 2026

Projects

VeroChat

PLATFORM / INFRASTRUCTURE (IN DEVELOPMENT)

Startup · Solo build

2026 – Present

- Architecting and deploying a real-time platform from zero on **Docker Swarm**, owning the full lifecycle — containerization, staging/production environments, and service orchestration — across a **Rust** backend, **Vue.js** frontend, and **PostgreSQL**.
- Building the event-driven data path on **Kafka**, **Flink**, and **Redis**; developed largely through **AI-assisted engineering** (LLM agents, prompt design, and token/cost optimization) to compress delivery time.

Community & Impact

CENSORSHIP CIRCUMVENTION INFRASTRUCTURE

During Iran internet outages - 2026

- Deployed and managed a proxy cluster (based on **Xray**, **Tor** transport modules and tunneling methods) providing unrestricted internet access for **150+** users (**~1 TB/month**) on a **personal budget**.

SRE ARTICLE

Aug. 2025

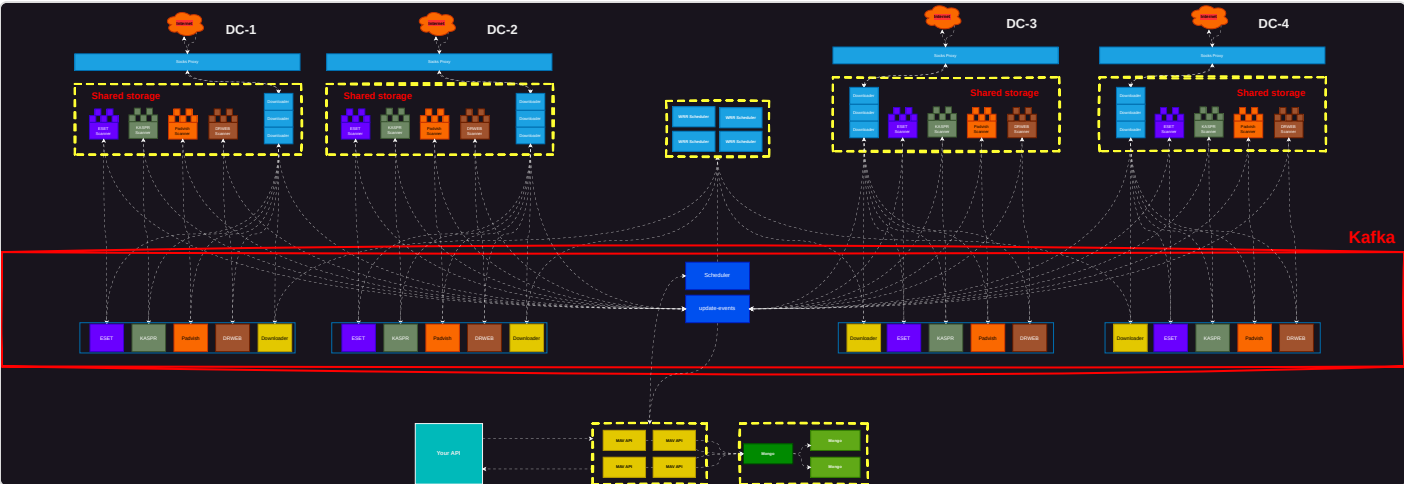
- Authored *"A review of increasing site stability with Site Reliability Engineering (SRE) and Chaos Engineering"* exploring the strategic integration of fault injection to reduce MTTR.

TECHNICAL MENTORSHIP

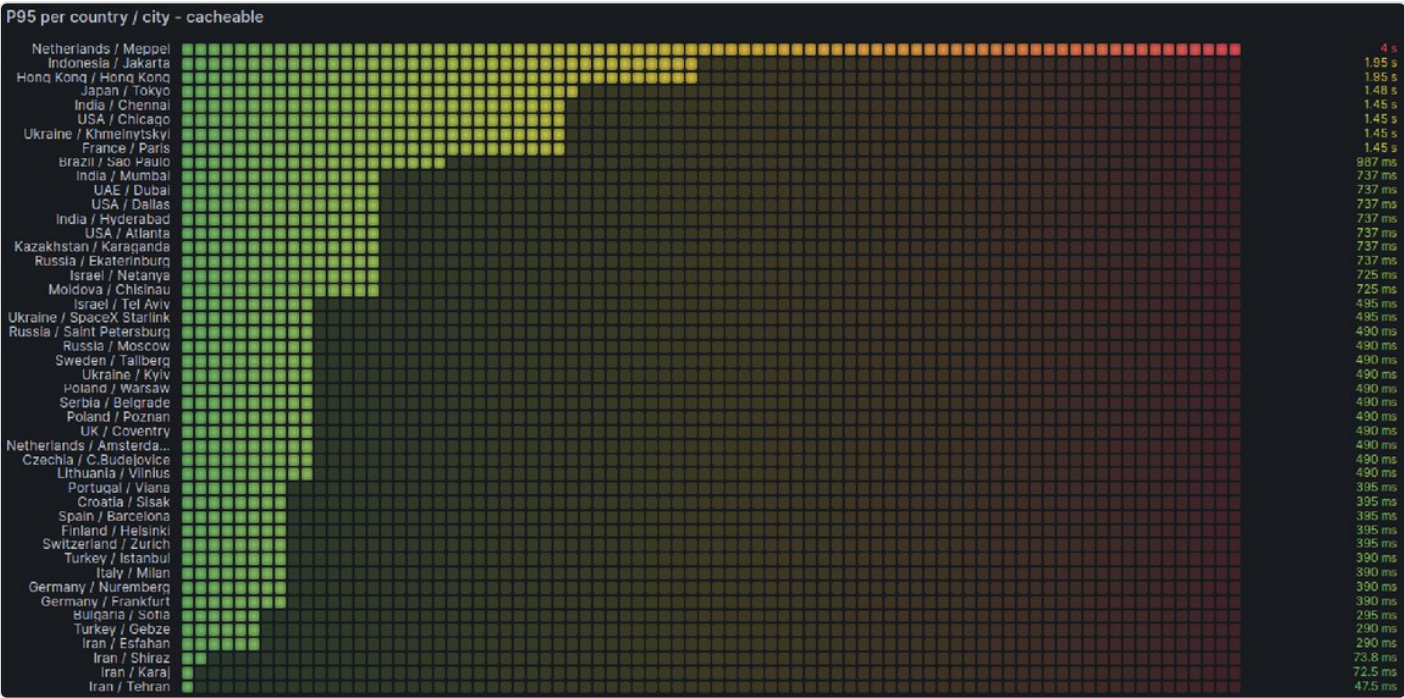
Jun. 2024

- Volunteered as a **Python instructor** for students (ages 12–20), teaching core programming logic and algorithmic thinking.

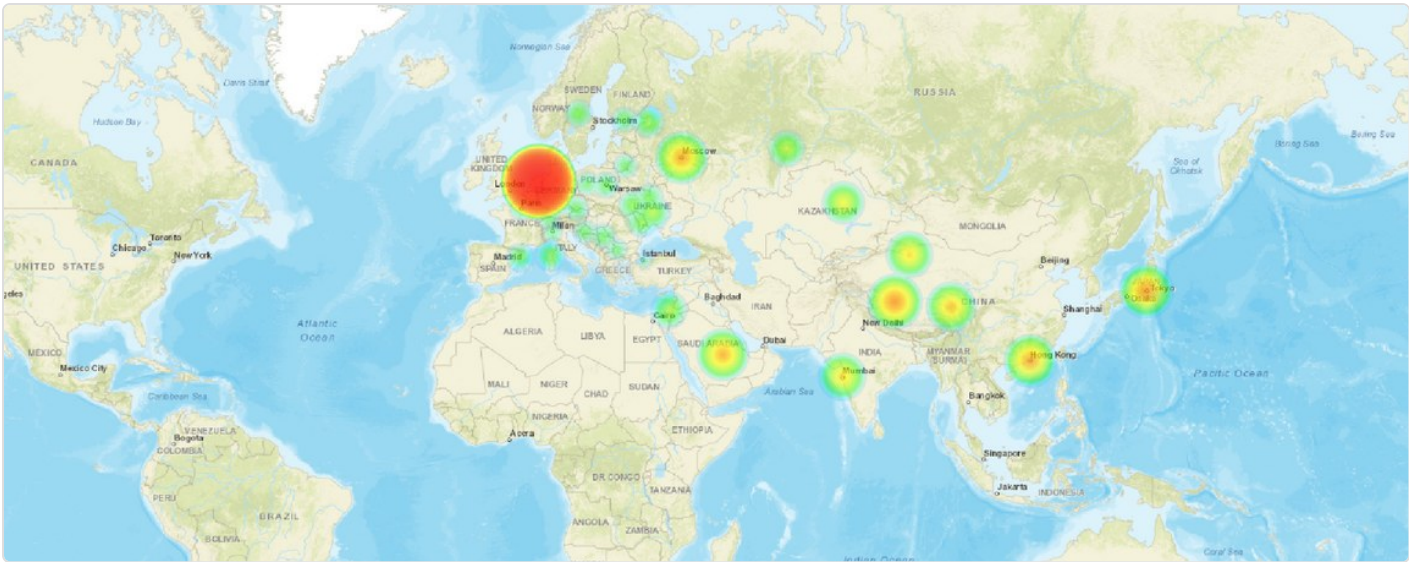
Selected Work



Multi-Antivirus (MAV) architecture. Event-driven scan pipeline across multiple datacenters (DC-1–DC-4): Socks proxy → shared-storage scanner pools (ESET, Kaspersky, Padviser, Dr.Web) and downloaders → per-engine work queues.



Global response time — p95 per country/city. Tail-latency tracking across 45+ cities in 28 countries (Tehran ~48 ms to worst-case ~4 s), the signal used to drive latency reductions.



Global latency heatmap. Geographic view of API response times feeding the same Python/FastAPI monitoring system.



Dependency health dashboard (proxy/API checker). Pythonic checker monitoring critical external dependencies (payment, mail, auth providers) — response time, failure rate (1.59% shown), tunnel latency and HTTP status mix.