

MAJID AMINZADEH

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SUMMARY

Senior Software Engineer with 10+ years designing and building backend and distributed systems, and more recently AI applications. Experience spans fintech and banking infrastructure, event-driven data platforms, and cloud-native services, including a bank API integration platform adopted by 4+ financial institutions and a pipeline unifying ~12M records for company search. Current work centers on reliability and observability for production LLM agents: an automated evaluation framework now used for model selection and feature validation, a real-time pipeline streaming every agent interaction to analytics, and per-agent failure handling that ensures users always get a meaningful response.

SKILLS

AI & Agentic Systems: LangChain4j, Prompt Engineering, RAG (Retrieval-Augmented Generation), LLM-as-Judge Evaluation, Agent Evaluation & Reliability

Languages: Java, Kotlin, Go

Backend & Architecture: Spring Boot, Akka, Microservices, Event-Driven Architecture, Domain-Driven Design (DDD), Distributed Systems Design, REST / API-First Design (OpenAPI), Hibernate/JPA

Data & Messaging: Kafka, Stream Processing, PostgreSQL, MongoDB (basic), Elasticsearch (Search & Vector Store), Protocol Buffers

Cloud & Infrastructure: Docker, Kubernetes, Kustomize, AWS, Azure, Terraform, CI/CD (GitHub Actions), Keycloak, OAuth2/OpenID Connect, OpenTelemetry, Prometheus/Grafana

Practices & Tools: Agile/Scrum, Code Review, Mentoring, Unit & Integration Testing (JUnit), Git, Gradle, Maven

EXPERIENCE

Senior Software Engineer | Volvo Cars

Feb 2025 – Present · Stockholm, Sweden

- Designed and built an LLM-as-judge evaluation framework for a production AI agent. Each test case defines natural-language assessment criteria, and a configurable judge model scores both the agent's final output and its full session trace (tool calls, actions, and reasoning steps) against them. Replaced a slow, error-prone manual process of side-by-side model comparison with automated, repeatable batch runs across ~100 team-authored test cases. The framework is now the team's standard for both model selection and validating agent behavior whenever features are added or updated; CI/CD integration is the next planned step.
- In a multi-agent chatbot where agents operate independently, unhandled errors reached users as raw 5xx failures and were difficult to trace back to the agent that caused them. Engineered an exception-handling layer that catches these errors, attributes each one to its originating agent while preserving the session trace, and applies per-agent rules for retries, fallbacks, and user-facing messages. Errors are converted into structured responses the UI uses to decide how to handle each case, so users always get a meaningful response instead of a raw server error.
- Built a real-time Kafka pipeline that streams every agent session interaction (user and AI messages, tool calls, and tool responses) to the analytics team as it happens. Captured events by decorating LangChain4j's ChatMemory, publishing each message individually without modifying agent logic. Designed the event schema within the constraints of LangChain4j's data model, using session IDs, timestamps, message sequence, and tool-call IDs to guarantee uniqueness, ordering, and data integrity. Ensured reliable delivery through at-least-once semantics with unique keys for downstream deduplication, retries, and a dead-letter topic, and used virtual threads to keep publishing off the agent's response path. Replaced a weekly manual process of extracting session data from Redis, transforming it, and loading it into Snowflake, which risked permanent data loss because Redis held data only briefly; analytics now has complete, up-to-date data for reporting.
- Migrated identity management from a legacy Keycloak instance owned by another team to an upgraded, self-managed deployment on Kubernetes, configured with Kustomize and delivered through CI/CD. Moved all configuration, realms, clients, and roles to the new instance. To achieve zero downtime, built dual-server support in Kotlin that let the application authenticate and authorize against both Keycloak servers at once during the transition, and coordinated the cutover with the platform team and the teams whose applications depended on authentication, so users and dependent services saw no disruption. The move gave the team full ownership of configuration and release cycles, enabled faster deployments, and reduced observed authentication response times by about two-thirds.
- Moved Kafka services from AWS to Confluent Cloud on Azure as part of a company-wide infrastructure move. Worked with the platform team on the new environment and handled the hands-on migration, including configuring deployments, transferring topics and data, and switching producers and consumers to the new cluster with zero downtime and no data loss.
- Missing build configuration had previously caused failed builds and deployments. Introduced a custom Gradle task in Kotlin that validates all required configuration at the start of the build and fails fast when anything is missing, and integrated it into the team's build pipeline so these issues are caught before they can reach deployment.
- In-car app asset URLs pointed to storage in a region the assets weren't permitted to be served from, creating a data-residency compliance issue. Designed a relative-URL scheme and a matching resolution endpoint that resolves each asset

request to compliant storage and serves it transparently, meeting the compliance requirement with zero changes to existing in-car app integrations. The endpoint is now the most-called in the team's APIs.

- Maintained and extended a data-ingestion pipeline that consolidates data from multiple internal and external sources into PostgreSQL to power Volvo's customer support website, working with the engineering manager, project manager, and team on new requirements. Improved its reliability with better error handling, data-conflict detection, and alerting, so inconsistent or missing data is flagged before it reaches the website instead of failing silently.

Backend Software Engineer | Valitive AB

May 2022 – Feb 2025 · Stockholm, Sweden

- Built data-source integrations into an existing event-driven pipeline that unified company and business data from disparate sources. Used Kafka for messaging and Akka Streams for concurrent processing to transform ~12M raw records into unified, structured company entities, which power Valitive's customer-facing search and lookup product. Defined service data models code-first, compiled to Protocol Buffers for type-safe contracts across services.
- Designed the Elasticsearch layer that serves as the pipeline's primary data store, including how unified company entities are structured in the index and how search queries match against them, enabling search and lookup in Valitive's customer-facing product.
- Operated the pipeline's containerized services in production on Kubernetes and AWS. Diagnosed processing slowdowns and stalls under heavy load and resolved them by tuning CPU and memory resource limits, keeping the pipeline running stably.
- Wrote unit and integration tests (JUnit) alongside new features, maintaining coverage that caught regressions early and made refactoring pipeline code safe.

Tosan Banking and Payment Solutions

Tehran, Iran

Software Team Lead

Sep 2020 – Apr 2022

- Led a team of 6 engineers through an end-to-end initiative to build an API integration platform that lets third-party providers connect to core bank services. Architected the banking service infrastructure behind it, which was adopted by 4+ financial institutions.
- Architected and delivered an e-wallet support system that reconciles wallet balances against the ledger and flags any mismatch. This protected transaction integrity and prevented unauthorized money creation within the e-wallet platform.
- Designed the target microservices architecture for Tosan's core banking platform, defining how it would be split into independently deployable services containerized with Docker and orchestrated on Kubernetes. Led the migration of the first services onto the new architecture.
- Raised engineering standards within the team through rigorous code reviews. Beyond the team, was a regular point of contact for other product teams on feature design and technical decisions.

Java Developer

Apr 2018 – Sep 2020

- Owned the General Ledger and the core framework modules relied on across the company's banking products. Improved their performance, resolved long-standing bugs to reduce production issues, and added major features that other products depended on.
- Built the foundational REST service infrastructure used by the company's services. Served as the primary technical escalation point for other teams and mentored incoming engineers, groundwork that led to promotion to Software Team Lead.

Java Developer / Android Developer | Sepehr Intelligent Technology and Solutions

Sep 2017 – Apr 2018 · Tehran, Iran

- Delivered two Android applications for Saderat Bank (internal staff communication and employee time logging) and led end-to-end QA for a separate mobile payment application.

PHP Developer | Darmankade.ir

Nov 2013 – Jun 2015 · Tehran, Iran

- Engineered the backend and APIs for a medical-consultation scheduling platform, including an admin panel, a guided-question triage tool, and an SMS/email notification system.

EDUCATION

M.Sc. Artificial Intelligence — Sharif University of Technology, Tehran, Iran

2015

B.Sc. Software Engineering — Mazandaran University of Science and Technology, Babol, Iran

2012

TEACHING & MENTORING

- Led a software development workshop, mentoring early-career developers — Karyar College (2023)
- Designed and delivered a professional Java development curriculum, "Road to Become a Star Java Developer" — Hamro Institute (2022)
- Taught courses in Artificial Intelligence and Machine Learning fundamentals — Sharif ITC Institute (2021)

LANGUAGES

Persian (Native) • English (Professional Working Proficiency) • Swedish (B1)