

Moneshwar Chandrasekar

Software Engineer - AI Platforms, Full Stack & Distributed Systems

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SUMMARY

Software engineer with 3+ years building AI-assisted test authoring, browser/mobile agent runtimes, and enterprise SaaS across Java, Python, TypeScript, and React. Owns cross-product delivery spanning frontend, backend services, agents, and multi-region infrastructure.

EXPERIENCE

Software Engineer - R&D | Testsigma

Bengaluru, India

Jun 2024 - Present

- Re-architected AI test-step generation from two sequential LLM passes to a **deterministic mapper over recorder events**, cutting average generation time from **4-5 minutes to 7 seconds** and reducing LLM cost to **zero on the best-case path**, with a bounded fallback for unobservable actions.
- Re-platformed the browser/mobile automation runtime onto a new Python agent and replaced screenshot polling (one frame every 2-3 seconds) with WebSocket/H.264 streaming at **30 FPS**; added manifest-based upgrades plus iOS and cloud-device communication.
- Built the **Learn & Automate** service from its first commit: exploration sessions, an LLM gateway, S3 artifact publication, knowledge-graph ingest, bulk updates, and acceptance of learned test cases into Testsigma folders.
- Delivered Analyzer and Autohealing workflows used across the customer base and handling **30K requests/day**: failure classification, causal prior-step detection, ranked suggestions, and self-healing decisions using RAG, Qdrant, tool calling, memory, and LangChain.
- Drove the Arcus TMS-Testsigma integration across backend and identity services and two React frontends: project linking, event-driven suite/plan creation, folder mirroring, silent SSO, and single-invite multi-product provisioning.
- Extended Copilot test execution to Salesforce and mobile, adding pre-learned element support, session persistence, and a decoupled lifecycle so execution no longer depended on the browser recorder.
- Cut enterprise test-authoring load time from **10s to 2s** through frontend caching, Hazelcast, JPA specifications, and query refactors; implemented SSE across FastAPI, Java, and React for **4x faster** AI feedback and remediated critical XSS findings.
- Authored architecture RFCs and drove cross-repository production releases; onboarded incoming software engineers through architecture and codebase walkthroughs, collaborated on implementation, and reviewed critical changes.

Developer Intern - Full Stack | Testsigma

Bengaluru, India

Mar 2023 - May 2024

- Built several core Testsigma product surfaces from the ground up, including the end-to-end Dashboard and 10+ Settings and Billing experiences, spanning React data flows and Java/JPA services; also resolved P0 customer issues.
- Expanded natural-language test automation across Android, iOS, and web, and introduced controlled parallel execution to improve the stability of local test runs.

TECHNICAL SKILLS

Languages: Java, Python, TypeScript/JavaScript, SQL, C++

Backend & AI: Spring Boot, FastAPI, NestJS, JPA, LangChain, RAG, Qdrant, REST, GraphQL, WebSockets, SSE

Frontend & Agents: React, React Query, browser extensions, Appium, Selenium, scrapy/H.264

Data & Platform: MySQL, PostgreSQL, MongoDB, Redis, Hazelcast, AWS, S3, Docker, CI/CD

SELECTED PROJECTS

News Intelligence RAG Platform - Built a three-service pipeline for news ingestion and conversational search using Python scraping, TypeScript/Express, Gemini, Jina embeddings, Qdrant, Redis, and a streaming React interface.

Multi-tenant SMS Gateway - Built a FastAPI/PostgreSQL platform with JWT and API-key authentication, device registration, SMS job orchestration, delivery-state tracking, Alembic migrations, and a React operations dashboard.

EDUCATION, SPEAKING & INDUSTRY RECOGNITION

B.E., Electronics and Communication Engineering - Sri Venkateswara College of Engineering

2020 - 2024

CGPA: 9.19/10 | Chennai, India

- Distinguished Speaker, Developers Conclave 2026**, Department of AI & ML, Dayananda Sagar College of Engineering - spoke on real-world software engineering, AI advancements, industry expectations, and career development.
- Represented Testsigma at **Agentic Summit 2025**, hosted by Magicball and Grayscale Ventures; demonstrated Atto and its seven specialized AI agents to founders, builders, and AI teams in Bengaluru.
- Led Team Himawari to runner-up at the **Testsigma AI in Test Automation Hackathon 2024**, building an AI Performance Testing Engine during a two-day sprint; judged by the co-founder of Portkey.ai and Testsigma's CEO.
- Served as the sole technical lead for Testsigma's internal vibe-coding contest, troubleshooting implementation issues and supporting approximately **100 non-technical participants** throughout the event.
- Testsigma Ownership Award, Q3 2024, for exceeding delivery commitments with zero known bugs.