SHARAN KARTHIKEYAN

Chicago, IL
sharankarthikeyan.com | linkedin.com/in/sharankarthikeyan | github.com/sharankarthikyan

SUMMARY

Software engineer with 3+ years at Zoho building high-scale backend systems. Currently developing backend features with Java, Spring Boot, and SQL, writing unit and integration tests, and building Python-based AI agents for a banking client at Mphasis.

EDUCATION

Illinois Institute of Technology, Chicago, IL **Aug 2024 - May 2026**
Master of Computer Science, **GPA: 4.0/4.0**

St. Joseph's College of Engineering, Chennai, India **Aug 2017 - May 2021**
Bachelor of Engineering in Computer Science and Engineering, **GPA: 3.33/4.0**

PROFESSIONAL EXPERIENCE

Software Engineer (Level 3) **Aug 2026 - Present**
Mphasis

- Developing backend features using Java, Spring Boot, and SQL for a banking client.
- Writing and executing unit and integration tests for backend services.
- Built a Python API gateway enabling AI agents to access Jira, Confluence, and Zephyr services.
- Developed an AI-assisted workflow to turn Jira requirements into reviewable manual test scripts, flag missing context, and trace test steps to source evidence, with QA approval gates for Zephyr publication.
- Built agentic testing workflows with Python and LangGraph to extend existing Selenium C#/NUnit suites, evaluate whether proposed tests detect known defects, and present execution evidence for human review.
- Designing reusable agent skills and a portable UI-testing runner that lets QA testers execute human-written test cases through coding agents, with supervised execution, independent result checks, and traceable evidence.

Graduate Teaching Assistant **Feb 2025 - May 2026**
Illinois Institute of Technology *Chicago, IL*

- Supported 120+ students in systems programming and 200 students in databases through grading, tutoring, and technical guidance.
- Automated grading workflows using Python and Perl and deployed them on Google Cloud Platform.

Member of Technical Staff **May 2021 - Jul 2024**
Zoho Corporation *Chennai, India*

- Migrated CRM Canvas from a relational database to a key-value store, reducing first-read latency by 38%.
- Implemented gRPC-based communication for internal service-to-service calls.
- Built a proxy layer for mail requests originating from Zillum, enabling request throttling and controlled traffic flow to downstream mail services.
- Delivered CRM Canvas features, including Record View, used by more than 50K users daily.
- Developed Java and Spring backend components for Zoho Mail's storage layer, implementing message persistence and retrieval workflows.

Project Trainee **Mar 2021 - May 2021**
Zoho Corporation *Chennai, India*

- Built REST APIs and full-stack email modules using Tomcat, JSP, Ember.js, SMTP, and IMAP.

PROJECTS

VoiceCraft **Mar 2026 - Present**
Next.js, TypeScript, Python, LiveKit, PostgreSQL, Prisma, Twilio, Google Cloud, Docker

- Engineered a multi-tenant voice AI platform for appointment booking, availability checks, and automated customer follow-ups.
- Built a real-time voice pipeline with LiveKit, Google Chirp, Gemini, and Google TTS. Integrated Twilio, Google Calendar, Stripe billing, and call analytics.

HelpNest **Jan 2026 - Present**

Next.js, TypeScript, PostgreSQL, Qdrant, Redis, OpenAI, Anthropic, Docker

- Built an open-source, multi-workspace support platform that answers from a self-hosted knowledge base and escalates low-confidence conversations.
- Developed hybrid full-text and vector retrieval with citations, an embeddable widget, knowledge-gap analysis, and MCP access.

Bluefiber **Apr 2026 - Present**

Next.js, TypeScript, Fastify, Rust, Neo4j, PostgreSQL, LangGraph, Docker

- Built a chat-first code-intelligence platform that generates cross-service engineering blueprints and impact analysis from a graph of the codebase.
- Developed a Rust scanner using Tree-sitter and SCIP, wrote code relationships to Neo4j, and grounded a LangGraph agent in graph queries.

CalmGuide **Feb 2026 - Present**

Next.js, React Native, TypeScript, Python, FastAPI, PostgreSQL, pgvector, Docker

- Built a multilingual AI companion that provides structured, personalized guidance to caregivers during difficult dementia-related moments.
- Grounded responses in 41 pages from trusted medical sources using hybrid pgvector and full-text retrieval, with SSE streaming and encrypted data.

Threshold **Apr 2026 - Present**

Go, Fiber, Next.js, PostgreSQL, Redis, Slack, Docker

- Built an MCP security gateway in Go that intercepts AI-agent tool calls and applies policies before execution.
- Implemented execute, pause, and block decisions with Redis-cached policies, Slack approvals, a real-time dashboard, and an append-only audit trail.

ResearchGraph AI **Apr 2026**

Next.js, TypeScript, Python, FastAPI, Neo4j, OpenAI, WebSocket, Docker

- Built ResearchGraph AI for the HackWithChicago 3.0 hackathon, transforming academic PDFs and Semantic Scholar's 200M+ paper catalog into an interactive knowledge graph.
- Implemented grounded RAG with deterministic citation validation, citation-chain discovery, research insights, and real-time ingestion progress.

Kine Agent **Jun 2026 - Present**

Rust, Tauri, React, TypeScript, SQLite, Git Worktrees, Agent Client Protocol

- Built an open-source, local-first desktop orchestrator for supervising Claude Code, Codex, and Antigravity sessions from one review interface.
- Designed a Rust adapter layer that normalizes agent event streams, isolates every session in a git worktree, and exposes diff review and approval gates.

SKILLS

Programming Languages: C, C++, Java, Python, JavaScript, TypeScript, Go, Rust
Frameworks/Protocols: React, Next.js, React Native, Node.js, FastAPI, Spring Boot, Redux, LiveKit, WebRTC, gRPC, MCP
Databases: SQL, PostgreSQL, DynamoDB, MongoDB, Cassandra, Redis, Elasticsearch
Cloud/DevOps: AWS (Lambda, ECS, S3), GCP, Docker, Kubernetes, Terraform, Git, CI/CD, Linux, Kafka
Data/AI: LangChain, LangGraph, CrewAI, LlamaIndex, RAG, Qdrant, pgvector, Neo4j, Prompt Engineering, LLM Agents and Orchestration
Concepts: Microservices, REST APIs, System Design, Data Modeling

CERTIFICATIONS

Machine Learning Specialization, Stanford University / DeepLearning.AI Aug 2025

Google Cybersecurity Professional Certificate, Google / Coursera Jan 2024