

Harish Suresh

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EDUCATION

Master of Science in Computer Science

Indiana University, GPA: 3.93/4.0

Aug. 2024 – May 2026

Bloomington, IN

Bachelor of Engineering in Computer Science

Anna University, CGPA: 8.6/10

Aug. 2018 – May 2022

Chennai, India

EXPERIENCE

Software Development Engineer

Heartland Community Network

Jun. 2026 – Present

Remote

- Shipped a React/TypeScript and FastAPI campaign builder with a 3–4 engineer team for Adtua, an out-of-home ad marketplace, replacing email handoffs for 15–20 planners; 200 briefs went from 2–3 days to same-day
- Implemented draft-state cleanup after planner feedback showed abandoned drafts holding live inventory, releasing screen holds and uploads whenever a planner revises an earlier selection
- Designed FastAPI reservation APIs with idempotency keys and PostgreSQL exclusion constraints, returning the original booking on retries and HTTP 409 on conflicts, with 25 integration and concurrency tests covering both
- Proposed and moved media validation, H.264 transcoding, and thumbnails off the request path into Celery workers (Redis, S3, FFmpeg) with capped backoff retries, terminal failure states, and end-to-end OpenTelemetry tracing
- Engineered a LangChain campaign planner that enforces budget, location, and availability in code, ranks screens with Qdrant, and has an LLM draft the plan; all 42 pilot briefs passed validation, including 2 correct no-matches

Software Developer

Sify Technologies

Aug. 2022 – Jul. 2024

Chennai, India

- Developed and maintained 6 Java/Spring Boot microservices in a distributed platform managing 10,000+ production network devices over SNMP and NETCONF, troubleshooting issues through log analysis and debugging
- Built a Java ETL pipeline into a Neo4j graph of 10k devices and 50k links, replacing spreadsheet tracing with NOC path and impact APIs; SHA-256 change detection cut nightly refresh from 45 to 30 min
- Secured device-management REST APIs with OAuth 2.0 and Spring Security role-based access control, built on JPA/Hibernate mappings for device metadata, configuration snapshots, and user roles
- Profiled slow device-management endpoints and added Redis caching with TTL expiry and invalidation on configuration pushes, cutting average API latency from 820 to 310 ms
- Automated Jenkins deploys for 6 owned services and partnered across teams to standardize 6 more, shipping Docker images through ECR to EC2; layer caching and parallel tests cut merge-to-deployment from 25–30 to 20 min
- Conducted code reviews for teammates, wrote design documentation, and onboarded new engineers to the platform
- Added virtual scrolling and client-side caching to AngularJS NOC dashboards used by 35 ops engineers for live device status, alarms, and topology, keeping large tables responsive under 30s polling

PROJECTS

Warden | Python, Gemini API, OpenTelemetry, GitHub Actions

- Created a GitHub issue-triage agent on a hand-written tool-calling loop that labels, comments, flags duplicates, and escalates; scores 39–40/40 on an end-state evaluation that gates every push in GitHub Actions
- Enforced AUTO/APPROVE/DENY policy in code before any API call, backed by a token scoped to one repository's issues; blocked 12/12 unsafe or injected actions across 3 runs vs 3–5/12 with prompt-only enforcement

SnapSend | Java, Spring Boot, PostgreSQL, Redis, React, TypeScript, Docker, AWS

- Developed a file-sharing service with JWT authentication and 24-hour expiring links, using Redis TTL for expiry checks, AWS S3 for storage, and PostgreSQL for file and link records
- Routed uploads up to 2 GB directly from the React/TypeScript client to S3 through presigned multipart URLs, keeping large transfers off the Spring Boot server

TECHNICAL SKILLS

Programming Languages: Java, Python, TypeScript, SQL, JavaScript

Fundamentals: Data structures & algorithms, object-oriented design, design patterns, distributed systems, SDLC, Agile

Frontend: React, Next.js, Redux, Zustand, AngularJS, Tailwind CSS, HTML/CSS

Backend: Spring Boot, Spring Security, JPA/Hibernate, FastAPI, Celery, Kafka, REST/OpenAPI, OAuth 2.0, JWT

Database Systems: SQL (PostgreSQL), NoSQL (Redis, Neo4j/Cypher, Qdrant)

Cloud & DevOps: AWS (EC2, RDS, S3, ECR), Docker, Kubernetes, Jenkins, Git, GitHub Actions, CI/CD

Applied AI: RAG, LangChain, tool-calling agents, vector retrieval, LLM evaluation, AI coding assistants

Testing: JUnit, Mockito, pytest, Vitest, integration and concurrency testing