

SURYA PRAKASH RAO KAPILA

Backend Software Engineer | Distributed Systems | AI-Assisted Development
Hyderabad, India | +91-6281505746 | surya.kapila@gmail.com | [LinkedIn](#) | [GitHub](#) | [Portfolio](#)

SUMMARY

Engineer with 5+ years of professional experience, including 3 years building production backend systems and 2.5 years in test and validation engineering. Currently technical owner of a .NET Framework (C#) and SQL Server middleware platform that connects an applicant tracking system to the external HRIS ecosystem, serving 40+ enterprise clients at over 100,000 requests per day. Builds partner integrations and public APIs end to end, from requirements gathering through production remediation, and modernises legacy services alongside new feature development. Applies AI throughout the software development lifecycle, building internal developer tooling while maintaining production engineering standards.

SKILLS

Languages: TypeScript, JavaScript, Python, SQL, C#

Microsoft Stack: .NET Framework, C#, WCF, ASMX, SQL Server, T-SQL, SOAP / XML web services, IIS

Backend: Node.js, NestJS, Express.js, REST & SOAP API design, microservices, systems integration

Frontend: React, Remix

Distributed Systems: Kafka, RabbitMQ, event-driven architecture, asynchronous processing

Databases: SQL Server, PostgreSQL, MongoDB, Redis, TypeORM, Mongoose

Cloud & DevOps: AWS (EC2, S3, CloudWatch), observability & monitoring, Docker, GitHub Actions, Jenkins, CI/CD

Testing & Security: MSTest, Jest, Cucumber, unit & integration testing, OAuth2, JWT, RBAC, Zod, secure coding

AI Engineering: Claude Code, Claude API / Anthropic SDK, Gemini Flash, RAG, ChromaDB, structured outputs, prompt engineering

Tools: Git, GitHub, Jira, Agile / Scrum

PROFESSIONAL EXPERIENCE

Software Engineer | Cadient Talent | Hyderabad | May 2025 – Present

- Primary technical owner of a platform serving 40+ enterprise clients at over 100,000 requests per day, leading production support, client onboarding, and vendor integrations.
- Develop and maintain a .NET Framework (C#) middleware layer of WCF and ASMX SOAP services and REST endpoints, sitting between the internal applicant tracking system and the external HRIS ecosystem and responsible both for consuming partner integrations and for the public APIs exposed to external consumers.
- Shipped 6 new integrations and modernised 5 existing ones in 14 months, each run from requirements gathering through interface design, C# implementation and production rollout: ZipRecruiter Jobs, AppCast job board export, UKG Pro new hire export, AccuSource background screening, QJumpers candidate import, and the internal Job, Location and User APIs.
- Own data integrity at system boundaries, validating inbound and outbound payloads, preventing duplication and loss, and absorbing vendor API changes without client-facing downtime.
- Resolve customer-reported production issues end to end, tracing failures across the C# layer, SQL Server and third-party APIs, and communicating root cause and remediation directly to enterprise clients and internal stakeholders.
- Develop and maintain a multi-tenant Node.js and TypeScript service handling Job, Employee and Location synchronisation, with REST APIs on TypeScript, Zod, SQL Server and TypeORM plus retry and reconciliation handling so partial failures do not corrupt client data.
- Write unit tests for C# services with MSTest, using AI to generate first-pass coverage and reviewing every case before merge.
- Built internal engineering tooling on Claude Code and a RAG index over the codebase, cutting the time to trace a defect through an unfamiliar integration and shortening onboarding for new joiners.
- Work through pull requests, peer code review and CI/CD pipelines, holding AI-generated changes to the same review bar as hand-written code.

Software Engineer & Consultant | CoSchool | Hyderabad | Jul 2023 – Apr 2025

- Built production REST APIs and backend services in Node.js, NestJS and TypeScript on an Agile team, applying object-oriented design and established service patterns.
- Designed an event-driven notification platform on Kafka, decoupling distributed services through asynchronous messaging instead of synchronous calls.
- Cut database load 35% by introducing Redis caching on hot read paths.
- Improved backend response times roughly 20% through query optimisation and service refactoring.
- Deployed and validated services with Docker; used AWS CloudWatch for observability across logs and metrics, monitoring application health and triaging production and pre-production issues.
- Wrote Python scripts, schedulers and automated workflows to handle recurring backend and operational tasks without manual intervention.
- Expanded automated regression coverage using Jest and Cucumber, raising confidence in release cycles.
- Covered frontend delivery in React and Redux for six months during a team resource shortfall, building and shipping UI features alongside backend work.
- Mentored junior engineers through code review and backend design sessions.

Career Break: full-time preparation for the Indian Civil Services (UPSC) examination Mar 2020 – Jun 2023

Automotive Test Engineer | Robert Bosch GmbH (via Hays) | Karlsruhe, Germany | Jul 2018 – Feb 2020

- Validated automotive RADAR systems in C++ with the Vector toolchain in a safety-critical environment, working to formal test specifications and defect-tracking discipline.

Test Engineer (Freelance) | Cint Consulting | Frankfurt am Main, Germany | Jun 2016 – Jun 2017

- Performed hardware-in-the-loop (HIL) testing of photovoltaic inverter systems in C++ using MATLAB/Simulink models and the Vector toolchain, validating controller behaviour against simulated grid and array conditions and automating regression test cases against formal test specifications.

PROJECTS

RAG Search Engine | Python, ChromaDB, RAG

Built an information retrieval engine that incrementally evolves from BM25 to semantic, hybrid, and RRF retrieval, forming the foundation of a production-style RAG system. Explores the engineering trade-offs behind modern search systems rather than treating RAG as a black box.

Coding Agent | Python, Gemini Flash

Designed and built a modular coding agent with separate planning, tool execution, and validation stages, enabling iterative code generation and verification before changes are applied.

AI Investment Pipeline | TypeScript, Claude API, ChromaDB

Designed and built an AI orchestration engine that coordinates three autonomous workflows for startup sourcing, thesis-based evaluation, and investment memo generation. Implemented structured outputs, caching, and run-level observability to deliver reliable, traceable, and repeatable results.

RabbitMQ Pub/Sub Service | TypeScript

Event-driven pub/sub service on RabbitMQ (TypeScript): topic and direct exchanges, dead-letter queues, publisher confirms, and prefetch-based backpressure, with three-way message acknowledgement for reliable delivery.

EDUCATION

M.Sc. Electrical Engineering & Information Technology | Hochschule Darmstadt, Germany Oct 2012 – Dec 2015

B.Tech. Electrical & Electronics Engineering | Jawaharlal Nehru Technological University Sep 2008 – May 2012