

Surya Sriram Duvvuri

Software Developer

Bengaluru, India

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SKILLS

Languages: Java, Python, JavaScript, TypeScript, SQL

Frameworks: React Native, Next.js, Node.js, Express.js, FastAPI

Databases: PostgreSQL, Supabase, Redis

DevOps & Cloud: Docker, Git, GitHub Actions, AWS ECS, AWS ElastiCache, AWS Amplify, CI/CD Pipelines

Agentic AI tools: Claude Code, Codex, Copilot, Cursor

Concepts: OOP, DSA, DBMS, REST APIs, JWT / JWKS / RS256, Row-Level Security, Agile, Scrum

EXPERIENCE

Software Developer Intern | Prizlyn Technologies Pvt Ltd

Dec 2024 – June 2026

Led end-to-end development of a cross-platform SaaS platform (React Native, Next.js, Node.js/Express, PostgreSQL), owning all architecture, security, and deployment decisions as the technical lead.

- Shipped the company’s core product: a React Native mobile app, a Next.js web app, and a Node.js/Express backend supporting three user roles.
- Designed and built a 300+ endpoint REST API with JWT authentication — HS256 session tokens plus JWKS-based RS256/ES256 verification for Supabase-issued tokens — role-based access control, request validation, rate limiting, and idempotent webhook ingestion.
- Modelled a 100+ table PostgreSQL schema on Supabase with Row-Level Security enforced at the database layer; implemented OTP-based verification and Supabase Storage for file management.
- Built the payment and payout infrastructure on Razorpay and RazorpayX, covering HMAC signature verification, guide wallet management, and automated UPI and bank payouts; found and fixed a production race condition that could leave a successfully retried payment unreconciled.
- Integrated OpenAI API to research tools for topic validation, hypothesis generation, literature review, and research planning, with token-usage analytics to track LLM costs; added InfoBip WebRTC for live mentor-scholar video sessions.
- Set up the entire DevOps pipeline from scratch: Dockerized services on AWS ECS with Redis (ElastiCache) caching, and 8 GitHub Actions CI/CD workflows covering linting, Jest unit/integration tests, security scanning, and automated deployments, replacing manual releases.

Frontend Developer Intern | Intel | Student Project Internship

Jan 2025 – Mar 2025

- Built the front-end of “School Student Companion,” a cloud-hosted SaaS study app for PC, in React with HTML/CSS, including an interactive PDF viewer with annotation and highlighting for NCERT textbooks.
- Worked with AI and backend engineers to add LLM-powered Q&A, automatic note generation, translation, and audio playback.

PROJECTS

CodeAGENT Vulnerability Scanner | FastAPI · Semgrep · Bandit · Multi-Agent LLM · Docker

- Designed a containerized FastAPI backend that coordinates multiple LLM agents that reason over static analysis output from Semgrep and Bandit, producing deduplicated, severity-ranked vulnerability reports across entire repositories.
- Implemented deterministic test stubs for reproducible evaluation, token accounting for LLM cost tracking, and structured JSON report generation with per-file and per-severity breakdowns.

Intelligent Q&A System | FastAPI · RAG · BM25 · TF-IDF · Python

- Built an end-to-end Retrieval-Augmented Generation (RAG) pipeline that crawls target websites, chunks and auto-indexes content using BM25 + TF-IDF retrieval, and returns grounded, source-attributed answers restricted to the indexed domain.
- Developed a FastAPI REST API with dedicated endpoints (/crawl, /index, /ask, /crawl-and-ask) and an observability layer with recall@k tests, timing metrics, and structured logging for low-latency iterative tuning.

FSapp | Android Secured File Sharing | Java · AES · RSA · SHA-256 · Firebase

- Developed an Android file-sharing app in Java with end-to-end encryption using AES (data), RSA (key exchange), and SHA-256 (integrity verification) to ensure secure transfers between devices.
- Integrated Firebase for cloud storage and user authentication; implemented offline peer-to-peer sharing, key validation workflows, and tamper-detection checks.

VoteKARO! | Online Voting System | *React Native · Firebase Realtime Database*

- Built a React Native remote voting app with live result updates powered by Firebase Realtime Database, supporting concurrent voters with consistent state across devices.
- Implemented Firebase Authentication with role-based access control (voter vs. admin), secure ballot submission, and data-integrity constraints to meet election-grade security practices.

RESEARCH

Sentiment Analysis of News: Traditional ML vs Pre-Trained Models | *CODE AI 2025*

- Presented a short paper comparing Naive Bayes & Logistic Regression against VADER & RoBERTa on news sentiment classification, evaluated across accuracy, precision, recall, and F1-score.
- Demonstrated that transformer-based models outperform classical approaches on nuanced sentiment while classical models offer faster inference, providing practical guidance on model-selection trade-offs for real-world NLP pipelines.

AI for Military Applications with Blockchain | *CRC Press · Published April 2025*

- Co-authored a book chapter on AI & Blockchain integration in defence operations (India & USA), covering autonomous vehicles, advanced weapon systems, and command & control (C2) systems.
- Analyzed real-world deployments of secure, decentralized intelligence, highlighting how blockchain immutability strengthens accountability in AI-driven military decision-making.

EDUCATION

B.Tech in Information Technology

2022 – 2026

Manipal Institute of Technology | Bengaluru

Minor Specialization: Computational Intelligence

Coursework: Artificial Intelligence, Machine Learning, Pattern Recognition, Neural Computation.

CERTIFICATIONS

- Core Java Specialization
- ABCs of AWS: Cloud Basics
- Oracle Database Specialization