

Gaurav Nagalapuram Venkataramanan

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EDUCATION

University of Southern California

M.S. Applied Data Science

Los Angeles, CA

Jan. 2025 – Dec. 2026

R.M.K. Engineering College, Anna University

B.Tech Information Technology

Chennai, India

Aug. 2020 – Apr. 2024

EXPERIENCE

Software Engineering Intern

Virtusa

Dec. 2023 – Apr. 2024

Chennai, India

- **Sole backend owner** of EMart IMS (Spring Boot, Angular, MySQL), coordinating 3 engineers; cut stock errors 40%.
- **Built SHA-256 CSV pipeline** across 3 backend modules, reducing invoice processing from ~2 days to same-day turnaround.

Software Engineer (Contract)

Aadithya Cars [automotive retail startup]

Apr. 2024 – Nov. 2024

Chennai, India

- **Scaled data ingestion 4x** by migrating to chunk-based CSV streaming across 500K+ row inventory datasets.
- **Reduced page load 75%** (3.2s to 800ms) via lazy loading and Brotli compression; achieved Lighthouse 95+ and 99.5% uptime with circuit-breaker patterns.

Software Engineering Intern

Virtusa

Jul. 2022 – Aug. 2022

Chennai, India

- **Delivered full e-commerce platform** (Spring MVC, Angular, MySQL) end-to-end in 6 weeks, coordinating 2 peers.
- **Engineered 8 REST endpoints** with Hibernate ORM and Spring Security; held sub-3s latency at 50 concurrent users.

Software Development Intern

SAWBON

Feb. 2022

Remote

- **Built concurrent Go REST APIs** using goroutines and connection pooling; sustained sub-250ms p95 response times with zero downtime.
- **Implemented Redis cache-aside** with TTL-based invalidation, reducing DB read load 30% and cutting median API latency 15%.

PROJECTS

AIStora | *Python, Flask, Docker* | github.com/naga251602/aistora

- **Outperformed pandas 3x** on sort, group-by, and join ops over 100K+ rows using Apache Arrow columnar format.
- **Shipped production-grade API** with JWT auth, RBAC, Docker Compose, and CI/CD at 85% test coverage.

Orilix | *Flask, Firebase, Three.js* | github.com/naga251602/orilix

- **Cut patient intake time by ~70%** by digitizing onboarding via unique per-patient sharable questionnaire links, auto-populating the day's visitor list on submission across 3 clinic workflows.
- **Reduced manual charting time 60%** by combining voice notes with AI-generated SOAP note summaries, eliminating an average of 15 min of documentation per appointment.

PriceWatch | *Next.js, Supabase, PostgreSQL* | github.com/naga251602/pricewatch

- **Built a price alert pipeline** that scrapes live Amazon prices on submission and fires instant email notifications, cutting average user response time to deals from hours to under 60 seconds.
- **Optimized hourly cron checks** with cross-user URL deduplication, reducing redundant scrape requests by ~40% across 200+ tracked products.

GBlog | *Next.js, TypeScript, Tailwind CSS* | github.com/naga251602/gblog

- **Achieved Lighthouse 95+** across mobile and desktop using SSG and ISR with on-demand revalidation via Supabase Webhooks, serving pages in under 200ms.
- **Improved tag search from $O(n)$ to $O(\log n)$** by implementing a self-balancing AVL tree index over post metadata, with automatic rebalancing on every content update.

TECHNICAL SKILLS

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

Backend: Spring Boot, Spring Security, FastAPI, Flask, Node.js, GraphQL, WebSockets, JWT, OAuth 2.0

Frontend: React, Angular, Next.js, Tailwind CSS, HTML/CSS

Databases / Infra: PostgreSQL, MySQL, MongoDB, Redis, Docker, AWS (EC2, S3, Lambda), GitHub Actions, Nginx

ML / AI: PyTorch, scikit-learn, BERT, DenseNet, HuggingFace, Pandas, NumPy, SHAP

PUBLICATIONS

Human-AI Collaboration for Backend Text Generation | ICCDS 2024, 4 citations, Best Paper 3rd Place

Sentiment-Based Drug Recommendation System | ICCDS 2024, 3 citations

Automated Pneumonia Detection using DenseNet | ICCN 2024