

Manupati Ramana Kumar

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Summary

Software engineer with experience building production-oriented backend systems using TypeScript, NestJS, Node.js, GraphQL and PostgreSQL. Built scalable APIs, asynchronous processing pipelines, caching layers and offline-first applications with a focus on reliability and maintainability.

Technical Skills

Languages: TypeScript, JavaScript, SQL, Python, Solidity
Web Technologies: Next.js, React, Zustand, Node.js, NestJS, REST APIs, GraphQL, WebSockets, Express.js
Databases: PostgreSQL, MongoDB, Redis, IndexedDB/Dexie.js, Prisma ORM
Architecture: Microservices, Offline-First, Event-Driven Systems, Idempotency, RAG Pipelines, Multi-Tenant Architecture
DevOps: AWS (EC2, S3), Docker, Git, Nginx, GitHub Actions

Experience

SDE Intern — SLOOZE May 2026 – Jun 2026

- Designed and implemented backend workflows using NestJS, GraphQL and Prisma for Goods Receipt Notes (GRN), claims and dispute management, including relational schema design and domain-specific business logic.
- Built an in-app semantic search prototype for GRN records using embeddings and a locally hosted LLM with Ollama to improve document retrieval while keeping data within the local environment.
- Developed a Python-based web crawler using HTTPX, BeautifulSoup and Playwright to extract structured supplier information from dynamically rendered IndiaMart pages.

Software Developer Intern — YEBSYS Aug 2024 – Dec 2024

- Implemented resilient real-time payment microservices, writing custom logic to handle network failures, retries and state consistency.
- Programmed idempotent webhooks to guarantee exactly-once execution for critical financial transactions, improving system reliability.
- Optimized high-traffic API endpoints by integrating Redis caching layers and asynchronous worker queues, reducing query latency by 30%.

Projects

TaskGlyph — Offline-First Workspace Next.js, IndexedDB, PostgreSQL

- Built a robust full-stack productivity application utilizing a local-first architecture to allow seamless offline user interactions.
- Developed a custom synchronization engine to reconcile client-server states, handling out-of-order updates and resolving conflicts using Last-Write-Wins logic.
- Integrated exponential backoff strategies to achieve 96% reliable data synchronization across devices under unstable network conditions.

TriaGen — Incident Management System NestJS, Redis, AWS

- Constructed an event-driven backend using WebSockets to broadcast low-latency, real-time updates to distributed users during critical outages.
- Configured asynchronous background job queues via Redis for automated SLA monitoring and retry mechanisms, decoupling heavy operations from standard requests.
- Streamlined asset management by offloading file uploads to AWS S3 using pre-signed URLs, minimizing server bandwidth and improving response times.

Rephrase AI — Distributed Processing Pipeline Node.js, Redis, LLM APIs

- Developed a multi-stage ingestion and chunking pipeline capable of processing large-scale text documents while navigating strict AI API token limits.
- Established dynamic API provider failovers to sustain high availability during external service outages and rate-limiting events.
- Eliminated redundant external API calls by implementing a Redis caching layer, significantly reducing operational costs and accelerating system response times.

Education

Dhanalakshmi Srinivasan University 2021 – 2025

B.Tech in Artificial Intelligence and Data Science | CCGPA: 7.69 / 10

Achievements

- Authored *Quantum-Inspired Deep Learning for Financial Data* in IJARIT (Vol. 11, Issue 3).
- Outperformed 70+ teams in Hack-O-Verse 2024 to secure \$800 in seed funding for an original project concept.
- Runner-Up at the AlgoBharat Hackathon; invited to attend the Algorand Greenhouse Hack, Singapore.