

# Sourav Rajvi

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## EDUCATION

### Bangalore Institute of Technology

Bachelor of Engineering in Electronics and Communication Engineering

2024

## EXPERIENCE

### Software Engineer

*AGSuite Technologies*

Nov 2024 – Present

- Architected AWS middleware integrating NetSuite with Zoho Books, processing 10,000+ PDFs daily using EC2 Auto Scaling, SQS, Lambda, S3, and RDS PostgreSQL, achieving 99.9% uptime and 75% faster processing.
- Deployed infrastructure with CloudFormation and CloudWatch monitoring, implementing S3 lifecycle policies reducing storage costs by 60% while maintaining audit compliance.

### Associate Software Engineer

*AGSuite Technologies*

May 2024 – Nov 2024

- Integrated Large Language Model capabilities using OpenAI API with prompt engineering and response streaming to automate document analysis and data extraction for 1,000+ financial records daily, reducing manual data entry by 70%.
- Built LLM middleware service with Node.js and Express.js implementing rate limiting, error handling, and retry logic for robust API integration.
- Developed RESTful API endpoints using RESTlet and Suitelet scripts in NetSuite to process LLM responses and integrate with backend workflows.
- Implemented token optimization strategies and response caching mechanisms, reducing API costs by 40% while maintaining processing accuracy.

## PROJECTS

### TaskMaster - Distributed Task Scheduling System | Node.js, gRPC, PostgreSQL

- Architected microservices task scheduler with Node.js, gRPC, and PostgreSQL, supporting horizontal scaling to 50+ workers processing 1,000+ concurrent tasks with sub-10ms latency.
- Implemented round-robin load balancing and heartbeat failure detection, achieving zero data loss through automatic task reassignment.
- Built RESTful API with real-time monitoring, optimizing PostgreSQL queries with SKIP LOCKED achieving <100ms latency.

### LSM Database Engine | TypeScript, Node.js

- Engineered LSM Tree storage engine in TypeScript achieving 3,500 ops/sec write throughput and <1ms read latency, implementing database primitives used in Cassandra and RocksDB.
- Optimized read performance by 90% through Bloom filter integration (92% hit rate) and sparse indexing, reducing disk I/O across 1,270+ lines of code.
- Built Write-Ahead Log crash recovery and multi-level compaction strategy, reducing read amplification by 50% and disk usage by 30-40%.

### IPO Tracker System | Node.js, Express.js, MongoDB

- Developed real-time IPO tracking platform with Node.js processing live market data feeds, implementing WebSocket for sub-second updates to 500+ concurrent users.
- Built RESTful API with Express.js integrating financial data providers, implementing Redis caching reducing response time by 65%.
- Designed MongoDB pipeline processing 100K+ records with optimized indexing achieving <50ms query times.

## TECHNICAL SKILLS

**Backend Technologies:** Node.js, Express.js, NestJS, RESTful APIs, gRPC, Microservices, WebSocket

**Languages:** JavaScript, TypeScript, Python, C++, Java

**Cloud & Infrastructure:** AWS (EC2, Lambda, S3, SQS, RDS, CloudWatch, Auto Scaling), CloudFormation, Docker

**Databases:** PostgreSQL, MongoDB, MySQL, Redis, DynamoDB

**Tools & DevOps:** Git, GitHub Actions, Docker, Jest, CI/CD

## ACHIEVEMENTS

- Earned a LeetCode rating of 1905 by solving over 500 complex algorithmic challenges; positioned in the top 10%.