Bommepalli Santosh Kumar Reddy

Software Development Engineer II

+91 8328393737 — santoshkumar321b@gmail.com

LinkedIn — GitHub — Portfolio — India

Profile Summary

Software Development Engineer II with 4+ years building scalable backend systems and distributed architectures. Deep expertise in Node.js, TypeScript, AWS. Proven track record in microservices, REST APIs, async workflows, payment integrations with strong focus on performance and cost optimization. 10+ awards including MVP, Best Feature, Best Progress.

Technical Skills

- **Backend:** Node.js, NestJS, TypeScript, REST APIs, Microservices, Distributed Systems, Event-Driven Architecture
- **Cloud:** AWS (ECS, SQS, Fargate, S3, Rekognition, CloudFront, Redshift, Kinesis Firehose), Exposure to GCP (Cloud Tasks, Pub/Sub)
- **Databases:** PostgreSQL, DynamoDB, MongoDB, Familiarity with Firestore, Elasticsearch, Redis
- **DevOps:** Docker, Terraform, GitLab CI/CD, Queue Systems, Webhooks, Workflow Automation
- **Frontend:** React.js, Redux, Virtualization, Performance Optimization
- **Tools:** Git, GraphQL, Apollo, Fastly CDN, AI Tools (Cursor, GitHub Copilot, Claude)

Work Experience

Software Development Engineer II, *Hornblower Group*　　　　　　　　　　　　　　　*Jul 2023 – Present*

- **San Diego Zoo Face Recognition:** Built identity verification with AWS Rekognition for seamless check-in and fraud detection using liveness detection serving thousands daily at world's largest zoo
- **Infrastructure Migration (V1→V2→V3):** Solely led migration from EC2 to ECS with Docker, Terraform, GitLab CI/CD, SQS error handling; implemented Redshift Serverless POC for analytics
- **Survey System:** Built post-tour feedback platform with automated email workflows, voucher generation, and reporting dashboards improving customer retention
- **Performance:** Reduced report generation 10min→1min via DynamoDB parallel fetching and S3 caching; improved frontend load 23s→1s using React virtualization
- **Cost Optimization:** Cut infrastructure costs 40% using Fargate Spot with automatic fallback and SIGTERM-based re-queuing
- Built distributed event-driven architecture using Node.js, AWS ECS, SQS, Fargate, Docker across microservices
- Implemented Fastly CDN for data delivery and CloudFront for image optimization
- Integrated **FreedomPay payment gateway** with secure backend for PCI-compliant payments (Apple Pay, Google Pay)
- Integrated Oracle Symphony POS using authenticated webhooks for real-time synchronization
- Developed AI-powered event automation system that processes natural language input to create events, manage ticket inventory, and streamline checkout workflows.
- Built monitoring dashboards tracking third-party integrations (GetYourGuide, Viator, Expedia), system reliability using Kinesis Firehose with S3 data lakes

Software Engineer, *SysCloud*　　　　　　　　　　　　　　　　　　　　　　　*Sep 2021 – Feb 2023*

- Developed backend services and REST APIs using Node.js, TypeScript, GraphQL in SaaS environment supporting cloud backup workflows
- Built React.js frontend features with Redux, designed reusable components and scalable architecture
- Integrated GraphQL APIs with Apollo, optimized data fetching patterns improving system performance

Projects & Key Achievements

- **Recognition:** 10+ awards including MVP, Best Feature, Best Progress, Best Attendance, Highest Jira Contributions
- **San Diego Zoo:** Face recognition system with fraud detection serving world's largest zoo using AWS Rekognition
- **Infrastructure:** Solely migrated EC2→ECS (Docker/Terraform/CI/CD) and implemented Redshift Serverless POC
- **Performance:** 90% report improvement (10min→1min) via parallel DynamoDB; 95% frontend improvement (23s→1s) via virtualization
- **Survey Platform:** Automated post-tour feedback with email workflows, vouchers, and analytics
- 40% cost reduction via Fargate Spot; built event-driven systems with appointment workflows, notifications, form submissions

Education

Bachelor of Technology (B.Tech) – Computer Science　　　　　　　　　　　Lovely Professional University, India