Meghasrivardhan Pulakhandam (Megha)

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Software Engineer – Distributed Systems & Cloud | Spring Boot, Node.js | Docker, AWS, Azure

Education

Masters in Computer Science – University of Colorado Boulder - **CGPA: 3.8/4**   Aug 2024 – May 2026

Bachelors in Computer Science – SRM University - **CGPA: 3.985/4**   Aug 2020 – May 2024

Experience

BioCollate - *Software Engineer – Distributed Systems - Colorado, USA*   Aug 2025 – Present
- Prototyping decentralized P2P messaging platform for secure research data sharing using libp2p protocols with end-to-end encryption and dynamic mesh routing to prevent data interception across distributed nodes
- Establishing Flutter mobile application with Node.js microservices backend, incorporating automatic peer discovery, NAT traversal, and asymmetric cryptography for decentralized communication
- Implementing IPFS for distributed file storage with content-addressed verification and local llama.cpp translation model for real-time cross-language protocol translation to enable secure cross-border collaboration

Infosys (SRM) - *Software Engineer Intern – Prototype App Development - Chennai, India*   Apr 2023 – Jun 2023
- Engineered a prototype parking management system with mobile workflows and backend allocation logic, achieving 40% faster slot assignment and 25% higher utilization in controlled test scenarios
- Architected IoT-based event tracking and automated billing pipelines for the prototype, improving fault detection and demonstrating scalable enhancements to system reliability and user experience

AnsrCoach - *Software Development Engineer Intern - Remote, India*   Jan 2023 – Feb 2023
- Developed and optimized a cross-platform education app with Flutter frontend, Node.js backend, and MongoDB, enabling real-time data synchronization and reducing API latency by 25%
- Transformed stakeholder-driven requirements into scalable features, resulting in a 30% improvement in student engagement and 30% higher user satisfaction, while ensuring maintainable, production-ready codebase design

RoboLab (SRM Club) - *Software Engineer – Server-Client Systems - Chennai, India*   May 2022 – Jul 2022
- Constructed a distributed server–client pipeline for real-time image processing in autonomous vehicles, improving accuracy by 20% and throughput by 25%
- Enhanced system reliability and efficiency through resource-aware design and rigorous testing, achieving a 15% increase in overall project performance and enabling dependable deployment for robotics applications

AjnaAI (SRM) - *Software Engineer Intern – Deep Learning & Distributed Systems - Remote, India*   Mar 2022 – Apr 2022
- Led a team of 7 to build a distributed fire detection system on Jetson Nano hardware, integrating deep learning with embedded system design to improve detection speed by 40% and system reliability by 25%
- Executed performance optimizations and instituted robust testing pipelines, ensuring fault-tolerant operation and high availability in safety-critical environments

Technical Skills

Programming: TypeScript, Java, JavaScript, C/C++, Go, Python, SQL, Linux/Unix, Git, Data Structures & Algorithms, Object-Oriented Programming

Backend: Spring Boot, Node.js, Express, REST API, GraphQL, Microservices, Maven/Gradle, System Design

Frontend: React, Next.js, React Native, Flutter, Redux, Sass, CSS, TailwindCSS, Bootstrap **Testing**: Jest, Cypress, Postman, Mocha

Databases: PostgreSQL, MongoDB, MySQL, DynamoDB, CassandraDB, AWS Aurora, Oracle, Firebase

Cloud/DevOps: Azure, AWS (ECS, S3, RDS, Lambda, Cloudwatch, API Gateway, Redshift), GCP, Docker, Kubernetes, Redis, Kafka, CI/CD (GitHub Actions, GitLab), Snowflake, Terraform

Projects

CodeSketch | *Node.js, Socket.IO, Redis, Docker, Cloud Infrastructure, AWS, Jest, CI/CD, React* 🔗
- Architected enterprise-grade real-time collaboration platform with Redis-backed distributed architecture and horizontal auto-scaling, supporting 1000+ concurrent WebSocket connections with <100ms P99 latency and 99%+ uptime in production
- Established end-to-end DevOps excellence through containerized Docker deployments, automated CI/CD pipelines via GitHub Actions, comprehensive observability using Prometheus/Grafana, and 85% test coverage, enabling zero-downtime releases

Mind-Bloom | *TypeScript, Docker, React, Express, PostgreSQL, JWT, Prisma, GCP, TailwindCSS* 🔗
- Architected and deployed a full-stack mental wellness application featuring mood tracking, journaling, and personalized affirmations, resulting in a 45% increase in user engagement and daily journaling consistency
- Programmed a secure authentication system with JWT and role-based access control, merged with PostgreSQL database using Prisma ORM, and deployed on Google Cloud Platform for scalability and 99.9% uptime reliability

Slick Chat | *NextJS, Socket.io, Redis, Kafka, Docker, Express, PostgreSQL, Google OAuth, Prisma, GCP, Sass, Vercel* 🔗
- Delivered production-ready real-time chat platform featuring Google OAuth authentication, Socket.io event streaming, and PostgreSQL with Prisma ORM, achieving secure, low-latency messaging with fault-tolerant data persistence across distributed systems
- Orchestrated a high-availability backend by leveraging Kafka for event-driven message queuing, Redis for in-memory caching, achieving horizontal scalability, 99.9% uptime reliability and sub-100ms message latency for 10K+ concurrent users