Sanjana Gaddamanugu

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Education

San Francisco State University **Aug 2022 - Dec 2024** | San Francisco, USA
Master of Science, Computer Science GPA: 3.9/4.0

Koneru Lakshmaiah University, India **Aug 2018 - May 2022** | Hyderabad, India
Bachelor of Technology, Computer Science GPA: 3.8/4.0

Technical Skills

Languages - Python, JavaScript/TypeScript, SQL, HTML5/CSS, XML

Frameworks/Libraries - React, Node.js, Express, Tailwind CSS, Pandas, NumPy, Pytest, Jest, Redux

Cloud/Database - AWS (EC2, S3, Lambda, Elasticsearch, CloudWatch), PostgreSQL, MongoDB, Oracle, ETL/ELT

Tools - Git, GitHub Actions, Docker, Cypress, Swagger, Postman, Vite, SonarQube, New Relic APM, Prometheus, Grafana

Certifications - AWS Certified Cloud Practitioner, Meta Advanced React, Udemy Full Stack Developer

Experience

Software Engineer | DXC Technology **Jan 2024 - Present | Remote, USA**

- **API Development:** Developed a REST API with AWS Elasticsearch for real-time product catalogs and AWS S3 for asset storage, achieving a 400ms average query response time. Managed Kibana dashboards for real-time analytics charts.
- **Authentication & Alerts:** Implemented secure OAuth2 and JWT-based authentication, configured AWS SNS/SQS for push notifications and message queuing, enabling reliable notification delivery.
- **Performance Optimization:** Monitored PostgreSQL RDS performance and API response times with AWS CloudWatch/Grafana dashboards collecting 150k metrics/min, reducing downtime by 30% through proactive alert thresholds.
- **Frontend Development:** Architected React application performance enhancements through strategic code splitting, lazy loading, and component memoization, reducing initial bundle size by 35% and page load times by 20%.

University Teaching Assistant | San Francisco State University **Jan 2023 - Dec 2023 | San Francisco, CA**

- **Graduate Teaching Associate:** CSC-698 (Topics in Computing) - Instructed advanced computing methodologies including system design principles, cloud deployment strategies, and design patterns, leading 25+ students through complex algorithmic implementations and database optimization techniques
- **Graduate Teaching Assistant:** CSC-805 (Data Visualization) - Guided students through core visualization principles, chart representation techniques, and interactive data exploration using Tableau, Power BI, D3.js, and statistical tools, fostering critical evaluation of visual analytics concepts

Software Engineer | Infosys **Aug 2021 - July 2022 | Hyderabad, India**

- **Database Optimization:** Optimized MongoDB performance through compound indexing strategies and query optimization, monitored with New Relic APM to achieve 40% reduction in query response time across 5+ production applications.
- **Test Automation:** Developed comprehensive test suites using Jest for unit testing and Cypress for end-to-end testing, achieving 85% code coverage and reducing production bugs by 40% through automated regression testing.
- **State Management:** Implemented Redux state architecture with middleware for handling async operations and side effects, managing application state across 15+ components and reducing prop drilling by 80%.
- **Documentation:** Documented and tested REST APIs using Swagger/OpenAPI and Postman, facilitated code reviews through Git pull requests ensuring coding standards across development team.

Projects

HealthShare: AI-Enhanced Pandemic Data Repository | PostgreSQL, React, Node, Express, Meta Llama, D3.js

- Engineered comprehensive data extraction pipelines using Python (Beautiful Soup, Scrapy, Tweepy) to collect and integrate 120K+ healthcare records from diverse sources including social media APIs and medical databases
- Designed normalized relational database schema in PostgreSQL, implemented data mapping strategies for heterogeneous data sources, and integrated Meta LLaMA language model for contextual analysis and NLP to identify pandemic trends
- Created an interactive visualization suite with D3.js featuring statistical dashboards, analysis charts, and advanced filtering capabilities, translating complex patterns into actionable insights

GatorMart: University Marketplace | MERN, AWS, WebRTC, Socket.io, Material UI, CI/CD

- Designed an e-commerce platform using MERN integrated with AWS (S3 for static file hosting, EC2 for server instances) and implemented real-time communication via WebRTC and Socket.io for instant messaging.
- Conducted A/B testing, integrated SonarQube for code quality, and established CI/CD pipelines via GitHub Actions.
- Implemented JWT-based user authentication, bcrypt for password hashing, and automated email verification using Nodemailer.