

Gagan Deep Reddy Reddivari

Senior Full Stack Developer | Location: Bloomington, IL | Phone: +1(309) 261-6120 | Email: Gagandeepreddyr123@gmail.com Links: [LinkedIn](#) | [GitHub](#) | [Medium](#) | [Portfolio](#)

PROFESSIONAL SUMMARY

- Accomplished Senior Full Stack Developer with over 8 years of comprehensive experience in the full Software Development Life Cycle (SDLC), involving analysis, design, development, testing, and maintenance of high-performance enterprise applications using Agile (Scrum/Kanban) and Waterfall methodologies.
- Expert in Backend Architecture, specializing in designing scalable, loosely coupled Microservices and Distributed Systems using Java (8/11/17), Spring Boot, Spring Cloud, and Golang; proficient in implementing Event-Driven Architectures using Apache Kafka and GCP Pub/Sub for high-throughput data processing.
- Advanced Frontend Proficiency in building dynamic, responsive, and accessible Single Page Applications (SPA) using React 18 (Hooks, Context API, Redux Toolkit), TypeScript, Angular, and modern JavaScript (ES6+), ensuring seamless User Experience (UX) across multiple devices and browsers.
- Cloud-Native & DevOps Specialist with extensive hands-on experience across AWS (Lambda, API Gateway, EC2, S3), GCP (Cloud Functions, Cloud SQL), and Azure; skilled in implementing robust CI/CD pipelines using Jenkins, Docker, Kubernetes, and Terraform to achieve 60% faster deployment cycles and zero-downtime releases.
- AI & Innovation Leader with specialized expertise in integrating Generative AI (GenAI) and Large Language Models (LLMs) into business workflows; proficient in LangChain, AWS Bedrock, and Vector Databases (Pinecone, FAISS, Weaviate) to build RAG architectures and intelligent automation agents.
- Database & Security Mastery, featuring deep knowledge of Relational (PostgreSQL, Oracle, MySQL) and NoSQL (MongoDB, DynamoDB, Redis) databases for query optimization and schema design, alongside implementation of secure authentication protocols using OAuth2, JWT, and Spring Security.
- Technical Leadership capabilities with a proven track record of mentoring developers, conducting rigorous code reviews, and driving engineering best practices (TDD, Clean Architecture) to deliver resilient, high-quality software solutions on time.

TECHNICAL SKILLS

Category	Technical Proficiencies
Programming Languages	Java (8/11/17), Golang (Go), Python, TypeScript, JavaScript (ES6+), SQL, PL/SQL.
Backend Frameworks	Spring Boot, Spring MVC, Spring Cloud, Spring Security, Hibernate, JPA, Gin (Go), Echo, gRPC.
Frontend Technologies	React 18 (Hooks, Redux, Context API), React Query, Angular, HTML5, CSS3, Bootstrap, Tailwind CSS, Material UI.
Cloud Platforms	AWS (EC2, S3, RDS, Lambda, API Gateway), GCP (Cloud Functions, Pub/Sub, Cloud SQL), Azure (App Service, SQL Database).

Category	Technical Proficiencies
AI & LLM Integration	LangChain, LangSmith, AWS Bedrock, OpenAI API, Vector Databases (Pinecone, FAISS, Weaviate), RAG Architectures.
Databases	PostgreSQL, MySQL, Oracle, MongoDB, DynamoDB, Redis.
DevOps & Tools	Docker, Kubernetes, Jenkins, Terraform, Git, GitHub Actions, Maven, Gradle, JIRA, Confluence.
Testing & Quality	JUnit 5, Mockito, TestNG, Karate, Selenium, Jest, Postman, SonarQube.

PROFESSIONAL EXPERIENCE

Hyundai America Technical Center, Inc. | *Detroit, MI*

Senior Full Stack Developer | *Apr 2025 – Present*

- Microservices Architecture:** Architected a decoupled, high-concurrency microservices ecosystem using **Java 17**, **Spring Boot**, and **AWS Lambda**, managing vehicle personalization requests for North American users.
- High-Performance Backend:** Productionized high-throughput **Golang** services utilizing **Goroutines**, worker pools, and back-pressure mechanisms, successfully handling **2,000+ API requests per hour** with sub-second latency.
- Frontend Modernization:** Designed and developed rich, responsive **React 18** Single Page Applications (SPA) for "Driver Profiles" and "Remote Features," utilizing **React Hooks**, **Context API**, and **React Query** for efficient state management and data fetching.
- API Security & Gateway:** Implemented **AWS API Gateway** as a centralized entry point, enforcing security policies via **OAuth2**, **JWT** (JSON Web Tokens), and throttling rules to protect backend resources.
- Database Optimization:** Modeled complex relational data schemas in **PostgreSQL**, writing optimized SQL queries and indexing strategies that maintained sub-second query responses under heavy loads.
- DevOps & Automation:** Automated the entire release lifecycle by building **CI/CD pipelines** using **Jenkins** and **Docker**, reducing deployment times by **60%** and achieving a zero-rollback record in production.
- Technical Leadership:** Mentored a team of developers, established strict **peer code review** standards, and led knowledge-sharing sessions on Clean Architecture, accelerating new hire onboarding by **25%**.

Tech Stack: Java, Spring Boot, Golang, React 18, TypeScript, AWS (Lambda, API Gateway), PostgreSQL, Docker, Jenkins.

Ford Motor Company | *Dearborn, MI*

Full Stack Developer | *Feb 2024 – Mar 2025*

- Data Ingestion Platform:** Designed and implemented a scalable, multi-tenant data ingestion pipeline (CFA²) to harmonize structured CRM metadata with unstructured social media feeds, enabling real-time feedback analysis.
- Hybrid Cloud Storage:** Architected a cost-effective hybrid data strategy utilizing **AWS RDS** for relational transactional data and **DynamoDB** for high-volume unstructured feedback logs, ensuring optimal read/write performance.

- **Full Stack Development:** Led the development of analytics dashboards using **React.js** and **Redux Toolkit**, integrating complex data visualizations that empowered marketing teams to track brand loyalty metrics.
- **Infrastructure as Code (IaC):** Provisioned and managed cloud infrastructure using **Terraform** scripts and deployed microservices to containerized environments using **Docker** and **GitHub Actions** daily across multi-cloud environments.
- **Resiliency & Testing:** Developed a comprehensive suite of **200+ automated tests** using **JUnit** and **Karate**, increasing code coverage to **90%** and significantly reducing regression testing cycles.
- **Monitoring & Observability:** Configured **Prometheus** and **Grafana** dashboards to monitor microservices health, API latency, and error rates, enabling proactive incident resolution.
- **Agile Collaboration:** Actively participated in all Agile ceremonies (Sprint Planning, Daily Stand-ups, Retrospectives) and collaborated with Product Owners to refine user stories and acceptance criteria.

Tech Stack: Java, Spring Boot, Spring Cloud, React.js, AWS (RDS, S3, DynamoDB), Terraform, GitHub Actions, Karate.

Tata Consultancy Services | *Hyderabad, India*

Lead Software Engineer | *Oct 2021 – Dec 2023*

- **Cloud-Native System Architecture:** Spearheaded the design and development of a resilient, **event-driven appointment scheduling engine** for diagnostic labs, leveraging **Spring Cloud** microservices to decouple core logic and ensure high availability across distributed locations.
- **High-Concurrency Event Processing:** Architected an asynchronous event processing pipeline using **Google Cloud Pub/Sub**, effectively handling real-time appointment updates and minimizing resource contention during peak traffic periods, which improved system throughput and reduced patient wait times.
- **Generative AI Integration:** Pioneered the integration of **GenAI APIs** and **LLM models** to automate the generation of proactive, context-aware patient notifications; engineered **GPT-crafted alerts** for rescheduling and availability changes, significantly enhancing user engagement.
- **Database Performance Tuning:** Managed and optimized **Google Cloud SQL (MySQL)** instances by implementing complex stored procedures, indexing strategies, and query optimization techniques to handle massive datasets of lab records and user data efficiently.
- **Distributed Caching Strategy:** Designed and implemented a multi-layer caching mechanism using **Redis** (in-memory data store) to cache frequently accessed reference data and API responses, reducing latency by **40%** and offloading read pressure from the primary database.
- **Secure API Development:** Developed and exposed secure, scalable **RESTful APIs** for patient portals and front-desk applications, implementing **JWT (JSON Web Tokens)** for stateless authentication and ensuring strict adherence to **HIPAA compliance** standards for data privacy.
- **Observability & Monitoring:** Configured comprehensive monitoring using **Google Cloud Operations (formerly Stackdriver)**, setting up custom dashboards and alerts to track slot usage trends, API error rates, and system health in real-time.
- **Quality Assurance & Testing:** Maintained a robust regression testing suite using **JUnit** and **Mockito**, achieving high code coverage and ensuring the stability of microservices throughout rapid Agile iteration cycles.

Tech Stack: Java, Spring Boot, Spring Cloud, MySQL (Cloud SQL), GCP (Pub/Sub), GenAI APIs, Redis, RESTful APIs, JWT, JUnit, Mockito, Git, Maven.

- **Serverless Workflow Automation:** Designed and built a distributed **workflow orchestration engine** for healthcare claim pre-authorizations using **Java Spring Boot** and **Google Cloud Functions**, enabling automated validation of complex payer policy rules.
- **Intelligent Data Enrichment:** Integrated internal **NLP (Natural Language Processing)** and **LLM setups** to auto-classify, parse, and enrich unstructured claim data, which reduced manual verification efforts and accelerated provider approval turnaround times.
- **Event-Driven Microservices:** Implemented **Google Cloud Pub/Sub** to decouple microservices, utilizing **dead-letter queues** and retry mechanisms to ensure message durability and reliable processing during high-load ingestion scenarios.
- **NoSQL Data Modeling:** Utilized **Google Cloud Firestore** for high-speed, flexible storage of claim metadata, designing optimized document schemas to support real-time status updates and queries.
- **Security & Authentication:** Implemented **OAuth2** security protocols to secure REST endpoints, ensuring authorized access for provider portals and third-party integrations.
- **Production Reliability:** Leveraged **Cloud Monitoring** to aggregate service logs and troubleshoot production incidents, significantly reducing Mean Time to Resolution (MTTR) for critical claim processing failures.
- **Cross-Functional Collaboration:** Collaborated closely with frontend developers to define JSON contracts and API specifications, ensuring seamless integration between the backend orchestration layer and dynamic authorization forms.

Tech Stack: Java, Spring Boot, Google Cloud Platform (GCP), Cloud Functions, Firestore, Pub/Sub, REST APIs, OAuth2, JUnit, Mockito, Cloud Monitoring.

- **Full Stack Portal Development:** Collaborated in the end-to-end development of an internal "Employee Onboarding and IT Asset Tracking Portal," contributing to **Spring Boot** backend services for user registration and **React.js** frontend components for asset allocation.
- **Azure Cloud Migration:** Assisted the engineering team in deploying backend services to **Azure App Service** and migrating legacy employee data to **Azure SQL Database**, ensuring high availability and scalability.
- **API Integration:** Facilitated seamless data exchange by integrating backend **RESTful APIs** with frontend forms, enabling real-time validation of inventory modules and automatic asset assignment workflows.
- **Frontend Engineering:** Enhanced user interface (UI) responsiveness and fixed cross-browser compatibility bugs using **HTML5, CSS3, and JavaScript**, ensuring a consistent user experience across the onboarding platform.
- **Quality Assurance Automation:** Developed and executed unit tests using **JUnit** and created comprehensive test data sets to validate business logic, coordinating with QA teams to identify and resolve defects early in the SDLC.
- **Documentation & Knowledge Sharing:** Authored detailed technical documentation on **Confluence**, including API swagger definitions, configuration guides, and environment setup procedures to support internal knowledge transfer.

- **Agile Participation:** Actively participated in **Agile/Scrum** ceremonies, including Daily Stand-ups, Sprint Reviews, and Retrospectives, ensuring alignment with project delivery goals and timelines.

Tech Stack: Java, Spring Boot, Azure App Service, Azure SQL Database, React.js, HTML5, CSS3, JavaScript, JUnit, Confluence, Agile (Scrum).

EDUCATION

Master of Science in Computer Science | University of Illinois Springfield | *May 2025*