

Sri Charan Byreddy

Software Engineer

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SUMMARY

Full-stack engineer (4+ years) building **Java/Spring Boot** and **Node.js/FastAPI** microservices with **React/Next.js** UIs, deployed on **AWS/Azure** with **Docker, Kubernetes, and CI/CD**. Skilled in **PostgreSQL/MySQL/MongoDB/Redis, Kafka, Spark**, and securing APIs with **OAuth2/JWT/RBAC**. Production work spans **ML (XGBoost, LightGBM)** and **GenAI (LangChain/RAG, FAISS/pgvector)** to cut latency, lower cost, boost reliability, and meet HIPAA/PCI compliance.

SKILLS

Languages & Frameworks: Java, Python, JavaScript (ES6+), TypeScript, SQL, Spring Boot, Hibernate/JPA, Node.js, Express.js, FastAPI, REST APIs, GraphQL
Frontend: React, Next.js, Redux/TanStack, Tailwind CSS, HTML5, CSS3, Responsive Design
Cloud & DevOps: AWS (EC2, S3, RDS, Lambda, SageMaker), Azure, Docker, Kubernetes, Terraform, Jenkins, GitHub Actions, GitLabBitbucket, CI/CD Pipelines
Databases & Data Systems: PostgreSQL, MySQL, MongoDB, Redis, Kafka, Spark, Vector DBs (FAISS, pgvector, Pinecone), Data Modeling, SQL Optimization, PySpark
ML & MLOps: XGBoost, LightGBM, MLflow, DVC, SHAP, LIME, Model Monitoring, Llama Index
Security & APIs: OAuth2, JWT, RBAC, API Gateway, HIPAA, PCI-DSS, Swagger/OpenAPI
Testing & Monitoring: JUnit, Mockito, Jest, Mocha, Cypress, Selenium, Postman, Load Testing, Performance Tuning, Prometheus, Grafana
GenAI: Lang Chain, RAG patterns (embeddings, retrieval, grounding), Prompt Engineering, Guardrails, A/B Prompt Tests
Collaboration: Agile (Scrum/Kanban), Jira, Confluence, Code Reviews, Sprint Planning, Cross-Functional Teams

PROFESSIONAL EXPERIENCE

Software Engineer - CVS Health | Tampa, FL Jul 2024 – Present

- API Integrations for Clinical Data:** Designed **Java 11/Spring Boot REST APIs** for labs, pharmacies, and billing hand-offs. Streamlined processes by **23%** and eliminated **40%** of downstream integration errors.
- Cloud-Native Modernization:** Refactored legacy **Java 8** codebases to **Java 11/17**, migrated modules to **AWS (EC2, S3, RDS)**, and containerized with **Docker/Kubernetes**. Dropped infrastructure cost by **19%**, mitigated downtime by **41%**, and scheduled weekly continuous releases with **Jenkins/GitHub** Actions
- Billing Workflow Optimization:** Tuned **Java 17** billing microservices with **Hibernate** and **PostgreSQL** validations. Accelerated claim processing by **26%** while sustaining throughput for **20,000+** monthly claims.
- HIPAA-First Security Architecture** Hardened PHI exchanges with **Spring Security + OAuth2/JWT/RBAC** on **Java 11 microservices**. Prevented unauthorized access across **15+** applications and diminished security incidents by **~37%**.
- Machine Learning for Claim Triage:** Integrated a Python FastAPI **XGBoost** model with Java 17 Spring Boot claim services via API Gateway. Compressed review cycles from **2.5 hrs** to **1.6 hrs** and boosted throughput by **21%**.
- PHI De-Identification:** Introduced **spaCy + Transformer NER** microservices within **Java 11 Spring MVC services**, reducing manual redaction effort by **57%** and ensuring audit compliance.
- GenAI-Powered Coverage Advisor:** Built a **LangChain RAG** service with **FAISS/pgvector embeddings**, surfaced via a **Java 17 Spring Boot gateway** with PHI guardrails. Lowered clinician Average Handle Time by **19%** and improved accuracy in policy lookups.
- Observability & Reliability Framework:** Instrumented **Java microservices** with **Prometheus metrics** and **Grafana dashboards**. Strengthened incident visibility and trimmed MTTR by **22%**.

Environment: Java 11/17, Spring Boot 3, REST APIs, Hibernate/JPA, PostgreSQL, AWS (EC2, S3, RDS), Docker, Kubernetes, Jenkins, GitHub Actions, OAuth2/JWT/RBAC, FastAPI, XGBoost, spaCy, LangChain RAG, FAISS/pgvector, Prometheus, Grafana

Full Stack Developer – Rubixe Disruptive Technologies | India Sep 2022 – Jul 2023

- React Dynamic Rendering:** Refactored **React storefront components** with caching, code-splitting, and lazy loading to improve page responsiveness. Elevated navigation speed by **35%**, reduced average load times by **1.8s**, and enriched the experience for **15k+** monthly active shoppers.
- Node.js Commerce Services:** Designed **Node.js services** for catalog, cart, and checkout with asynchronous event-driven processing. Minimized backend request latency by **28%**, scaled throughput to **50k+ concurrent transactions**, and sustained stability during festival peaks.
- Razorpay Payment Gateway:** Delivered a **JWT-secured Razorpay integration** with retry/backoff orchestration for failed requests. Lifted transaction success rates by **22%**, decreased payment drop-offs by **15%**, and strengthened checkout completion across web and mobile apps.
- PostgreSQL Analytics Redesign:** Re-architected **PostgreSQL schemas**, partitioning strategies, and indexes for reporting pipelines. Achieved **30% faster query performance**, supported real-time campaign dashboards, and compressed analytics lag from **20s** to **<7s** during flash sales.
- Docker/Kubernetes Release Automation:** Containerized commerce microservices with **Docker** and orchestrated deployments on **Kubernetes** with **Jenkins CI/CD pipelines**. Halved release cycles by **50%**, ensured zero-downtime updates, and advanced release frequency from monthly to weekly.
- LangChain RAG Conversational Search:** Implemented **LangChain retrieval-augmented search** with **FAISS embeddings** to power natural-language product discovery. Drove down zero-result queries by **18%**, raised CTR by **12%**, and stimulated conversion from search to cart by measurable double digits.
- Predictive Commerce Recommendations:** Trained **XGBoost and LightGBM models**, deployed as **REST APIs** with **MLflow/DVC** lifecycle management. Generated a **9% increase in AOV**, extended session duration by **14%**, and advanced conversions by **11%**.

Environment: Node.js, React, Razorpay API, PostgreSQL, Redis, AWS, Docker, Kubernetes, Jenkins CI/CD, FAISS, XGBoost, LightGBM, MLflow, DVC

Software Engineer - Backend | Hexaware Technologies | India Jul 2020 –Aug 2022

- Real-Time Dashboards:** Delivered trading and fund dashboards with enhanced state management and rendering optimizations. Improved performance by **28%**, cut page load times by **2.5s**, and provided real-time visibility for **1,500+** traders.
- Transaction Processing Engines:** Built high throughput microservices for payments and loan approvals with optimized persistence and caching strategies. Lowered transaction latency by **20%** and scaled to **18k+ daily requests** during peak load.
- Compliance & Security Framework:** Implemented policy-driven access controls, JWT-based authentication, and end-to-end encryption. Reached **100% PCI audit compliance**, mitigated breach risks, and diminished fraudulent access attempts by **~31%**.
- Data & Reconciliation Efficiency:** Migrated reporting from relational to document-based storage with aggregation pipelines and indexing, while scripting settlement reconciliations with **Python/Linux jobs**. Accelerated query speed by **33%**, compressed report lag from **12s** → **<5s**, minimized reconciliation errors by **30%**, and saved **15+ hours** weekly.
- Document Intelligence for KYC:** Deployed **OCR pipelines** integrated with **retrieval-augmented generation (RAG)** for compliance document reviews. Elevated throughput by **25%**, lessened lookup errors, and ensured SLA adherence
- Fraud Detection Pipelines:** Introduced anomaly detection using streaming pipelines with auto encoders and Isolation Forest ML models. Advanced fraud catch accuracy by **20%**, **suppressed** false positives by **15%**, and **shortened** investigation cycles by **35%**.
- Continuous Delivery & Reliability:** Executed deployments with containerized microservices orchestrated on Kubernetes. Minimized rollout effort by **70%**, shrank release times from **3 hrs** to **90 mins**, and enabled zero-downtime updates.

Environment: Java 11/17, Spring Boot, React/Redux, NestJS, PostgreSQL, MongoDB, Docker, Kubernetes, Jenkins CI/CD, Python, Linux, Kafka, OCR, Autoencoders, Isolation Forests

EDUCATION

Master of Science in Engineering Science Data Science
University at Buffalo, State University of New York, Buffalo, NY