

PANDU RANGA VITAL

Software Engineer | Software Architecture & AI-enabled Developer Tools

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PROFESSIONAL SUMMARY

Software Engineer with 5+ years of experience building and modernizing enterprise systems with Java, Spring Boot, Angular, Oracle, and cloud platforms. Sole technical owner of a business-critical data platform serving 50+ users; delivered automation that saves approximately 400 hours per quarter, reduced data-ingestion turnaround from days to hours, and improved page-load performance by 40%. Experience spans software architecture, reusable platform capabilities, AI-enabled engineering tools, developer productivity, and API resilience. Recognized with the FedEx Bravo Zulu award for technical ownership and high-impact delivery.

TECHNICAL EXPERTISE

Backend	Java, Spring Boot 3.x, Spring MVC, Spring Data JPA, Hibernate, Spring Batch, REST APIs, Microservices
Frontend	Angular 17+/19, TypeScript, JavaScript, RxJS, PrimeNG, Angular Material
Data	Oracle SQL, SQL MERGE and batch processing, PostgreSQL, Redis, ChromaDB
Cloud & DevOps	GCP, PCF, AWS, Azure, Docker, Jenkins, GitHub Actions, CI/CD
AI / Engineering Tools	LLM applications, RAG, TAG, Ollama, Llama 3, CodeLlama, GPT-4o-mini, FastAPI, Streamlit
Architecture	Software architecture, API design, system design, monolith-to-microservices modernization, data-ingestion pipelines

PROFESSIONAL EXPERIENCE

Full Stack Developer <i>FedEx ACC — Advanced Capability Community</i>	Sep 2023 — Present Hyderabad, India
- Own the Domain Data Middle Layer end to end — architecture, development, and production support for a business-critical platform used by 50+ internal users across pricing systems. - Engineered proactive data-quality validation that catches defects before ingestion, saving the domain team approximately 400 hours of manual correction and review each quarter. - Designed an automated external-data ingestion pipeline that calls third-party endpoints, transforms responses, and ingests data internally; reduced turnaround from days to hours and removed 3-5 manual steps. - Architected a reusable Angular component library adopted by 5+ application teams and established a cross-team review committee for architectural alignment, code quality, and backward compatibility. - Modernized legacy monoliths into microservices and designed REST APIs supporting Oracle SQL MERGE operations and batch processing across enterprise integrations. - Improved page-load performance by 40% through targeted refactoring; improved API response times through Redis caching and query optimization. - Migrated applications from Jenkins to GitHub Actions as part of enterprise-wide CI/CD modernization, improving code quality and release velocity. - Mentor junior developers, conduct code reviews, and drive engineering standards; received the Bravo Zulu award for exceptional ownership and delivery.	
Technologies: Java, Spring Boot 3.x, Angular 19, Oracle SQL, Redis, PCF, Jenkins, GitHub Actions	
Software Engineer <i>Pioneer Infotech Private Limited</i>	Nov 2022 — Sep 2023 Hyderabad, India
- Developed scalable Java, Spring Boot, and Angular applications for a global analytics company providing credit ratings and risk-advisory services. - Migrated on-premises applications to AWS and Azure, improving scalability and availability while reducing operational costs. - Optimized Redis caching, delivering 30% faster data retrieval and improved application throughput. - Designed RESTful APIs for communication between microservices and external systems under high-traffic conditions.	
Technologies: Java, Spring Boot, Angular, REST APIs, Redis, AWS, Azure	
Java Full Stack Developer <i>Tata Consultancy Services</i>	Mar 2021 — Oct 2022 Bhubaneswar, India
- Developed and maintained full-stack Java, Spring Boot, and Angular applications for government services. - Contributed microservices and configuration enhancements to the Odisha Birth and Death Registration System serving millions of citizens. - Built responsive, accessible interfaces with mobile-first and cross-browser design principles. - Trained and supervised four developers, provided technical guidance, and conducted code reviews to maintain quality standards. - Contributed to agile planning, delivery updates, design decisions, and feature improvements.	
Technologies: Java, Spring Boot, Angular, Microservices, REST APIs	

SELECTED ENGINEERING & RESEARCH PROJECTS

TAG (Table-Augmented Generation) — Enterprise Data Intelligence
INDIVIDUALLY ARCHITECTED

Architected an enterprise data-intelligence platform that turns natural-language business questions into executable, validated data analysis and recommendations.

- Designed the workflow from intent and entity resolution through schema-relationship discovery, SQL generation and validation, execution, result analysis, and recommended data actions.
- Enables domain teams to compare datasets, identify data requiring attention for future releases, and investigate data issues without constant developer dependency.
- Recommendations remain human-reviewed; the platform does not autonomously modify production data.

Technology: LLM applications, SQL generation and validation, schema metadata, relational data analysis

Architecture Intelligence from GitHub
FORWARD DEPLOYED ENGINEER PROGRAM · COLLABORATIVE PROJECT

Collaborated across teams on a GitHub-connected solution that analyzes source repositories, reconstructs current-state architecture, and recommends architecture changes for new features and technology upgrades.

- Supported a workflow spanning repository analysis, architecture discovery, current-state visualization, proposed change analysis, and architecture recommendations.
- Completed the Forward Deployed Engineer Program; project outcomes and components are presented as a team effort.

Technology: GitHub, repository analysis, software architecture, architecture diagrams, LLM applications

Self-Healing API Clients with Tiered Routing
M.TECH RESEARCH · ACADEMIC PROJECT

Designed and evaluated a framework for resilient API interactions under runtime schema and API changes using LLM reasoning and tiered routing.

- Built a middleware healing proxy for failure detection, classification, transformation, and adaptation, grounded with specification knowledge through RAG and a reusable transform cache.
- Routed simple repairs to local Ollama models and complex structural transformations to GPT-4o-mini to study accuracy, latency, and cost trade-offs.
- Implemented a Streamlit observability dashboard and a 50-case automated evaluation comparing local-only, cloud-only, and tiered routing strategies.

Technology: Python, FastAPI, Ollama, Llama 3, CodeLlama, GPT-4o-mini, ChromaDB, Streamlit, Docker

EDUCATION, CERTIFICATIONS & RECOGNITION

M.Tech, Software Engineering BITS Pilani — WILP	2024 — 2026
B.Tech, Electronics & Communication Engineering JNTU Hyderabad	2015 — 2019
Certifications: Google Associate Cloud Engineer (GCP) Oracle Certified Professional: Java	
Recognition: FedEx Bravo Zulu award	