Praneeth Reddy Nagilla

Full Stack Developer

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LinkedIn | Portfolio | Github | LeetCode

Irving, Texas

Professional Summary

Full Stack Developer with 5+ years of experience developing platform-level, embedded, and enterprise systems across healthcare and regulated domains using **Java, C++, Python, and React**. Skilled in building real-time applications across **Windows, Linux, and QNX** environments with deep expertise in inter-process communication (DDS, TCP/IP, UDP), threading, and system debugging. Experienced in architecting secure, scalable microservices with **Spring Boot**, **Spring Cloud**, and **Node.js**, integrated into containerized CI/CD pipelines using **Docker**, **Kubernetes**, and **Azure DevOps**. Proficient in debugging and performance tuning with **WinDbg, GDB, PerfMon, and Valgrind**, and in implementing encrypted, fault-tolerant communication between distributed systems.

Earned a Master's in Computer Science, excelling in **algorithms, data structures, system design, and AI/ML**, with proven ability to translate emerging technologies such as LLMs into real-world, production-grade applications

TOOLS AND TECHNOLOGIES:

Languages: Java, C++, Python, JavaScript (ES6+), SQL
Frontend: React, HTML5, CSS3, Redux
Backend & Frameworks: Spring Boot, Spring Cloud, Node.js (Express), Hibernate
Operating Systems: Windows, Linux, QNX, RTOS (x86/ARM targets)
Protocols & Communication: DDS, TCP/IP, UDP, WebSockets
Build & CI/CD: Maven, Jenkins, GitHub Actions, Azure DevOps
Cloud Platforms: AWS (EKS, Lambda, S3), Azure (AKS, Monitor)
Containers & Orchestration: Docker, Kubernetes
Debugging & Profiling: WinDbg, GDB, Valgrind, PerfMon, Wireshark
Security & Compliance: TLS/SSL, OAuth2.0, RBAC, Encryption
Databases: PostgreSQL, MySQL, MongoDB
Testing & Automation: Google Test, JUnit, Mockito, PyUnit
Collaboration & Documentation: JIRA, Confluence

PROFESSIONAL EXPERIENCE:

Centene Corporation, Saint Louis, United States **Jan 2025 – Present**
Role: Full Stack Developer

Functional Role Details:

- Engineered backend modules in **Java, C++17, and Python** across **Windows, Linux, and QNX** environments, improving multi-threaded service performance by 35% through optimized synchronization and memory management.
- Developed real-time communication protocols using **DDS and UDP/TCP sockets**, enabling 25% lower latency and deterministic messaging between distributed healthcare subsystems.
- Automated kernel-level testing with **Google Test**, **PyUnit**, and custom harnesses, cutting manual validation time by 40% and improving regression reliability.
- Optimized CI/CD workflows using **CMake**, **Docker**, and **Azure DevOps**, reducing build times by 30% and streamlining cross-compilation pipelines.
- Implemented reusable platform patterns (Factory, Observer) for concurrent service management and standardized process orchestration.
- Integrated **Spring Boot** APIs with **JWT** and **OAuth2.0**, securing inter-service data exchange across clinical microservices.
- Performed advanced root-cause debugging with **WinDbg**, **GDB**, and **Wireshark** to resolve deadlocks and packet losses in multi-core environments.
- Collaborated with hardware and cybersecurity teams to validate secure I/O communication, TLS configurations, and encrypted channel authentication.

TCS, Hyderabad, India **Jan 2020 – July 2023**
Role: Full Stack Developer

Functional Role Details:

- Developed enterprise-scale backend services using **Java**, **Spring Boot**, and **Spring Cloud**, processing 10M+ transactions daily with a 99.9% uptime SLA.
- Enhanced API throughput by 25% through efficient thread pooling and async processing, reducing response times during peak transaction loads.
- Implemented **CI/CD pipelines** using **Jenkins** and **GitLab CI**, accelerating release cycles by 40% through automated build validation and static analysis gates.
- Refactored modular services into **Dockerized microservices** deployed on **Kubernetes**, improving scalability and fault isolation.
- Created **React**-based operational dashboards integrated with REST APIs for real-time risk monitoring and transaction analytics.
- Integrated **Kafka** and **RabbitMQ** message queues for high-throughput, event-driven data pipelines between financial systems.
- Applied **FMEA and PCI-DSS** security practices to harden transaction APIs, incorporating encryption, access controls, and compliance auditing.
- Led debugging and JVM optimization using **JProfiler** and **HeapDump**, reducing memory leaks and increasing performance stability.

Birlasoft , Hyderabad, India **Nov 2017 – July 2018**

Role: Software Engineer Intern

Functional Role Details:

- Built compliance modules in **Java 11**, **Spring Boot**, and **Hibernate**, automating 50K+ claim validations weekly and improving audit accuracy by 40%.
- Reduced query execution time by 45% through PostgreSQL and Redis optimization for claims data reconciliation.
- Automated prior authorization workflows with **Spring Batch**, cutting manual processing time by 60%.
- Developed responsive UI dashboards using **React** and **Angular**, enhancing user efficiency and clinical data visibility.
- Integrated **Apache Camel** pipelines to route HL7/FHIR messages across payer-provider networks.
- Implemented **JUnit**, **Mockito**, and **Protractor** test suites to ensure compliance with HIPAA standards.
- Collaborated with SMEs to align data models with FHIR interoperability standards for electronic health record systems.
- Participated in Agile sprint planning and contributed documentation to **Confluence** for platform readiness reviews.

EDUCATION:

- MS in Computer Science from University of Central Missouri **Aug 2023 – Dec 2024**

CERTIFICATIONS:

- AWS Certified Developer - Associate (DVA-C02) | Amazon Web Services
- Microsoft Certified: Azure Developer Associate (AZ-204) | Microsoft

PUBLICATION:

Title: Development and Performance Evaluation of NavIC-Based Reefer Monitoring System
Authors: Praneeth R, B. Sumanth Reddy, A. Supraja Reddy, K. Satyanarayana, V. Dileep Reddy
Published In: Advances in Signal Processing and Communication Engineering, Springer, July 2024
Abstract: Proposed a NavIC-based monitoring system to ensure real-time tracking of environmental conditions in refrigerated containers (reefers) for transporting temperature-sensitive goods. The system leverages NavIC for precise geolocation, enhancing logistics efficiency and reducing spoilage losses.
Link: https://link.springer.com/chapter/10.1007/978-981-97-0562-7_15