

# NITHYANANDA REDDY

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## PROFESSIONAL SUMMARY

- 7+ years of experience as a Full Stack Developer delivering robust, high-performance software solutions across e-commerce, government, logistics, and finance domains.
- Specialized in **Java**, **Spring Boot**, and **ORM frameworks** like **Hibernate** and **JPA**, with deep expertise in backend architecture, **API development**, and **microservices**.
- Proven front-end development skills using **Angular**, **React**, **JavaScript**, **HTML5**, **CSS3**, and **Bootstrap**, creating intuitive, responsive, and cross-platform user interfaces.
- Proficient in database design and optimization with relational (**Oracle**, **MySQL**) and NoSQL (**MongoDB**) databases, handling complex queries and ensuring data consistency and scalability.
- Experienced in designing and consuming **RESTful** and **GraphQL** APIs using **JSON/XML**, ensuring efficient, scalable communication between client and server.
- Strong hands-on experience with **Git**, **Agile/Scrum** methodologies, and tools like **JIRA** for issue tracking, sprint planning, and continuous delivery alignment.
- Skilled in **DevOps** practices, including containerization with **Docker**, orchestration with **Kubernetes**, and cloud deployments using **AWS services**.
- Implemented end-to-end **CI/CD** pipelines using **AWS CodePipeline**, **CodeBuild**, and **CodeDeploy**, enabling fast, automated, and reliable release cycles.
- Integrated **Apache Kafka** and **RabbitMQ** for building real-time, event-driven architectures and asynchronous service communication. Leveraged **Redis** Cache to reduce latency, decrease database load, and enhance application responsiveness in high-traffic systems. Solid understanding of **Java concurrency**, including **multithreading**, **thread pools**, and concurrent collections for building scalable and thread-safe applications.
- Adept at **debugging**, performance tuning, and solving complex technical issues in both frontend and backend systems.
- Deep knowledge of **algorithms**, **data structures**, and **design patterns**, promoting clean, maintainable, and efficient codebases across distributed systems.
- Excellent **team collaborator** with a focus on **delivering business value** through technology innovation and continuous improvement.

## TECHNICAL SKILLS

- **JAVA/J2EE Technologies:** Java 17+, J2EE (Servlets, JSP, EJB, JavaBeans, JDBC, JMS, JPA, JNDI, JAX-WS, JAX-RS), MVC, Struts
- **Programming Languages:** Java (8/11/17), Kotlin, TypeScript, Python, JavaScript, C++
- **Frameworks:** Spring Framework (MVC, Security, Data JPA, Cloud, WebFlux), Hibernate (ORM, Search, Validator), JSF, Struts 2, NodeJS, SpringBoot, ReactJS, AngularJs, NextJs
- **Cloud Platforms:** AWS (EC2, RDS, S3, DynamoDB, Lambda, CloudFormation, CloudWatch, CodePipeline, CodeBuild, Elastic Beanstalk), Docker, Kubernetes, Terraform
- **Mark-up/XML Technologies:** XML, XSD, JSON
- **Web/App Servers:** Apache Tomcat, JBoss/WildFly, Jetty
- **Databases:** Oracle, MySQL, PostgreSQL, DB2, MongoDB, Cassandra
- **Web Services/API Services:** REST (JAX-RS, Spring REST), SOAP (JAX-WS), GraphQL, OpenAPI/Swagger
- **Testing Tools:** JUnit, Mockito, TestNG, AssertJ, WireMock, Cucumber, Selenium, JMeter, Postman, Karate
- **Logging/Others:** Log4j/Logback, SLF4J, Micrometer, Prometheus, Grafana
- **Version Control:** Git, GitHub, GitLab, Bitbucket
- **Development Tools/Environments:** Maven, Ant, Eclipse, IntelliJ IDEA, Visual Studio Code, Jira, PyCharm, Jupyter, Gradle
- **Middleware/Messaging Systems:** Apache Kafka, RabbitMQ, ActiveMQ, Apache Camel, Spring JMS
- **CI/CD Tools:** Jenkins, GitLab CI/CD, Docker Hub, AWS CodePipeline, AWS CodeBuild, Bamboo
- **Other Tools and Technologies:** UNIX, Apache Tomcat, Hibernate Search, Apache Cassandra-Spark Connector, Dropwizard, ELK Stack (Elasticsearch, Logstash, Kibana), Ansible, Kubernetes Helm, Perl, JMS (Java Messaging Service), Apache Maven, Shell

## EXPERIENCE

### Target

Software Developer

Mar 2024 - Present

Brooklyn, Minnesota

At Target, I worked as a Full Stack Java Developer on the pickup and delivery platform. On the frontend, I built responsive, modular components using **Angular 14**, **RxJS**, and **TypeScript**, integrating features like Google Maps for **real-time tracking** and **JWT**-based route guards for role-based access. On the backend, I developed **RESTful APIs** using **Java 17**, **Spring Boot 3.x**, and **Hibernate**, with **PostgreSQL** as the primary data store. I used **Redis** to cache frequent queries and **Apache Kafka** for handling asynchronous order and delivery events. I containerized services using **Docker** and deployed them to **AWS ECS** (Fargate). Infrastructure was managed through **Terraform**, and I set up **CI/CD pipelines** using **GitHub Actions** to automate builds and deployments. I also implemented **OAuth2** and

JWT for securing APIs, monitored service health using **Prometheus** and **Grafana**, and followed cloud-native practices to ensure performance and reliability across environments.

- Developed modular, scalable UI components using **Angular 14** and **TypeScript**, building dynamic user experiences for **pickup & delivery workflows**
- Implemented real-time features like delivery tracking via **Google Maps API** and interactive time slot pickers using RxJS and **Angular Reactive Forms**
- Enforced client-side security through **JWT-based Angular Route Guards** for **role-based access control**
- Delivered responsive, mobile-first designs with **SCSS Flexbox** and ensured accessibility compliance using ARIA attributes and semantic HTML5
- Optimized frontend performance with **lazy loading, Webpack chunking, and custom preloading strategies**
- Collaborated with **UX/UI designers** to implement intuitive interfaces aligned with business goals
- Designed and developed **RESTful APIs** and **microservices** using **Java 17, Spring Boot 3.x**, and **Hibernate ORM** with **PostgreSQL** for robust order and delivery management
- Secured APIs with **OAuth2** and **JWT**, defining and **enforcing user roles** (customer, admin, driver)
- Implemented caching strategies using **Redis** for improved performance and **reduced database load**
- Built event-driven components with **Apache Kafka** to enable **asynchronous processing** of order and delivery events
- Integrated **third-party services** including payment and tax APIs using **Spring Cloud OpenFeign** and applied circuit breaker patterns for resilience
- Wrote comprehensive **unit tests** with **JUnit 5** and **Mockito** to ensure code reliability and maintainability
- Leveraged additional **databases** such as **MongoDB** and **Cassandra** in polyglot persistence scenarios
- Worked with microservices frameworks including **Micronaut** and **Spring Boot** to build scalable backend systems
- Containerized applications using **Docker** with multi-stage builds for efficient images; **deployed on AWS ECS** (Fargate) ensuring scalable and highly available services
- Automated infrastructure provisioning and management with **Terraform**, covering **ECS clusters, Application Load Balancers, IAM roles, and AWS RDS databases**
- Built and maintained **CI/CD pipelines** using **GitHub Actions**, enabling automated build, test, and deployment workflows
- Configured **application monitoring** with **Prometheus** and **Grafana** for real-time metrics visualization and alerting
- Implemented secure communication protocols with **AWS Certificate Manager (ACM)** and enforced HTTPS via **Route53 DNS routing**
- Managed **environment-specific configurations** securely with **Spring Profiles** and AWS Systems Manager Parameter Store
- Applied **AWS IAM policies** to enforce least privilege security principles across services
- Collaborated in **cross-functional Agile teams** to continuously improve cloud infrastructure and deployment processes
- Utilized **CloudWatch** for health checks, auto-scaling triggers, and centralized logging integration with **ELK stack tools** (Elasticsearch, Logstash, Kibana)

## United States Patent and Trademark

Oct 2022 - Sep 2023

*Software Developer*

*Alexandria, Virginia*

Led the modernization of USPTO's patent processing systems by developing secure, **cloud-native applications** with **AI-powered** features. Delivered responsive **React-based UIs** integrated with scalable **Spring Boot microservices** and **event-driven architectures**. Migrated legacy workloads to AWS using **Kubernetes** and implemented **real-time data processing** with **Kafka** and **Kinesis**. Focused on accessibility, performance, and compliance with federal standards including FISMA and Section 508.

- Led the rebuild of core examiner and **public-facing UIs** using **React 17/19, Next.js 15, and TypeScript**, significantly improving usability and load performance.
- Developed reusable atomic design component libraries to ensure UI consistency across **examiner dashboards** and **filing portals**.
- Integrated **WebSocket-based real-time** collaboration features for **patent status updates, examiner notes, and system notifications**
- Enhanced accessibility by enforcing WCAG 2.2 / Section 508 compliance, using semantic **HTML** and **ARIA roles**, enabling inclusive federal user access.
- Implemented interactive patent analytics and productivity dashboards using **D3.js, Chart.js, and Observable Plot**, visualizing examiner throughput and legal timelines.
- Improved performance metrics (Lighthouse score, TTI) through **code splitting, lazy loading, and memoization techniques**.
- Designed and maintained high-throughput **Java 17 + ,Spring Boot 3.2 microservices** to manage patent metadata, filings, and examiner workflows.
- Built secure, scalable **REST and GraphQL APIs** supporting advanced search, pagination, and filtering of large patent datasets.
- Implemented **OAuth2 + JWT-based authentication/authorization**, aligning with USPTO security policies and role-based access controls.
- Developed asynchronous event-driven pipelines using **Apache Kafka** and **AWS Kinesis** for intake processing, notifications, and document updates.
- Integrated **PDFBox** to automate document parsing and **dynamic PDF generation** for examiner and legal reports.
- Applied **CQRS pattern** using Axon Framework to decouple read/write flows and support legal audit trails.
- Migrated legacy monoliths to **AWS EKS** with Istio service mesh, enabling secure, scalable microservices with real-time observability
- Implemented **GitOps** workflows using **ArgoCD** and **Terraform**, automating infrastructure provisioning and promoting **CI/CD**

best practices.

- Enforced **Zero Trust Architecture** using **SPIFFE/SPIRE**, securing service communication with **identity-based authentication** and **mTLS**.
- Achieved **40% cost reduction** through **dynamic autoscaling** of workloads using **KEDA**, optimizing **compute efficiency** across environments.
- Automated **FISMA compliance** and **security posture monitoring** via **AWS Security Hub** and **policy-as-code** using **Open Policy Agent (OPA)**.
- Integrated **AWS Bedrock (Generative AI)** to **auto-summarize patent documents** for examiner productivity.
- Built a **semantic prior art search engine** using **Hugging Face Transformers** to match concepts across patent repositories.
- Automated **document ingestion** using **AWS Textract** to **classify** and **extract structured data** from legal filings.
- Developed **vector search** capabilities using **OpenSearch Neural Search**, enabling **contextual patent discovery**.
- Delivered a **mission-critical patent examiner dashboard** used daily by over **1,000 USPTO staff**.
- Played a key role in **reducing application review time by 25%** through **UX streamlining** and **backend optimizations**.
- Actively participated in **Agile ceremonies** and **led React best practice sessions** across multiple teams.

## Kohl's

Jan 2021 - Sep 2022

Software Developer

Milwaukee, WI

Contributed as a **Full Stack Developer** to build a seamless **e-commerce and in-store shopping** integration platform. Delivered intuitive user features like **personalized recommendations** and **efficient checkout**. Optimized **backend inventory** management for **real-time stock synchronization**, enhancing customer experience and operational efficiency. The platform improvements led to increased **digital efficiency, customer satisfaction, and business growth**.

- Designed **responsive, user-friendly interfaces** using **Angular with TypeScript**, ensuring smooth navigation across desktop, tablet, and mobile devices.
- Implemented **Angular Routing** for seamless page transitions between products, cart, and checkout.
- Utilized **Angular Forms** to streamline user input for **account creation, checkout, and payments**, enhancing **user experience**.
- Employed **RxJS** for **asynchronous data operations**, enabling **real-time updates** on product availability, pricing, and promotions.
- Leveraged **Angular's Dependency Injection (DI)** to maintain **modular and testable code**.
- Improved performance with **lazy loading**, reducing initial load times by loading components **on demand**.
- Designed and developed **RESTful APIs** using **Spring MVC** to support **product search, authentication, inventory updates, and order processing**.
- Used **Hibernate ORM** for efficient **database CRUD operations** and optimized performance.
- Integrated **Spring Data** to handle **complex database queries** efficiently.
- Implemented **caching** with **Spring Cache** to reduce **redundant API calls** and improve speed.
- Built **reliable asynchronous messaging** with **RabbitMQ**, integrated via **Spring**.
- Managed **NoSQL data access** with **MongoDB** using **Spring Data MongoDB** and **Dependency Injection**.
- Combined **AWS RDS** (relational storage) with **ElasticCache (Redis)** for fast **in-memory caching**, improving **scalability and responsiveness**.
- **Containerized** applications using **Docker** and deployed scalable **microservices** on **AWS EKS (Kubernetes)** for **cloud-native orchestration**.
- Automated **infrastructure provisioning** with **AWS CloudFormation (IaC)**, ensuring **repeatable and consistent environments**.
- Applied **Canary deployment strategies** to roll out updates **gradually**, minimizing risk and enabling **production monitoring**.
- Monitored system health and performance with **AWS CloudWatch**, creating custom alarms and dashboards to proactively manage availability and performance.

## Pramati Technologies

Jul 2018 - Dec 2020

Software Developer

Hyderabad, India

Worked as a **Full Stack Java Developer** on **enterprise-grade collaboration and cloud solutions**, delivering secure, scalable web applications. Built modern **single-page applications** using **React** and integrated them with robust **backend services developed in Java and Spring Boot**. Ensured consistent **performance, security, and cloud readiness across deployments**. Collaborated cross-functionally to deliver high-quality features aligned with business requirements.

- Developed dynamic and responsive UIs using **React, JavaScript (ES6+), Redux, and React Router**, improving user engagement and performance.
- Built reusable **UI components** with functional components and **Hooks**, enabling clean state management and simplified side-effect handling.
- Integrated **Axios** for **REST API** consumption, enabling seamless **interaction between frontend and backend systems**.
- Applied **CSS3, SASS, and Bootstrap** for layout and design consistency across platforms, ensuring responsive behavior.
- Implemented form **validation, authentication workflows, and conditional rendering** for user-driven experiences.
- Enhanced client-side performance through code splitting, lazy loading, and bundle optimization using **Webpack** and **Babel**.
- Designed and developed **RESTful microservices** using **Java 8+, Spring Boot, Spring MVC, and Hibernate**, supporting modular architecture and clean separation of concerns.
- Secured services using **Spring Security, OAuth2, and JWT**, enforcing role-based access controls.

- Built data access layers using **JPA/Hibernate**, integrated with **MySQL** and **Oracle databases** for efficient query processing.
- Implemented asynchronous task processing and service decoupling using **RabbitMQ**.
- Created and executed unit and integration tests using **JUnit and Mockito** to ensure code quality and reliability.
- Developed **APIs for file uploads, notifications, and activity logs** with proper versioning and error handling.
- Containerized applications with **Docker** and deployed services to **AWS EC2** and **Elastic Beanstalk environments**.
- Automated build and deployment workflows using **Jenkins and Maven**, improving release efficiency.
- Managed secrets and environment configurations securely using Spring Profiles and AWS Systems Manager Parameter Store.
- Monitored logs and metrics using **AWS CloudWatch**, enhancing observability and response times to incidents.
- Collaborated in **Agile/Scrum environments**, participating in sprint ceremonies, code reviews, and cross-functional development.

## EDUCATION

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University of Central Missouri, Kansas City, MO | *Master's, computer science*