

Nishal Chandra Reddy

Full Stack Developer | AI/ML Enthusiast

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PROFESSIONAL SUMMARY

Full Stack Developer with 4 years of experience designing, building and deploying scalable web applications, microservices and APIs using Spring Boot, Node.js, and React. Skilled in architecting distributed systems, cloud-native solutions and integrating AI/ML technologies. Recent Master's graduate in Computer Science from ASU, with expertise in machine learning and data engineering.

TECHNICAL SKILLS

Programming Languages: Python, Java, JavaScript, TypeScript, Go, C/C++, Bash

Frameworks: Spring Boot, Node.js, FastAPI, React, Next.js, Vue.js, Svelte, Tailwind CSS, Material UI, REST, GraphQL, gRPC, WebSockets, OpenAPI, Swagger

Cloud Platforms & DevOps: AWS (EC2, Lambda, ECS, RDS, S3, CloudFormation, CDK), GCP, Azure, Docker, Kubernetes, Nginx, Consul, Terraform, Ansible, Keycloak, OAuth 2.0, JWT, Git, GitHub Actions, GitLab CI/CD, Jenkins, SonarQube

AI, ML & Data Science: Supervised & Unsupervised Learning, LLMs, Transformers, TensorFlow, PyTorch, LangChain, Pandas, NumPy, OpenCV, Plotly, Matplotlib

Databases & Data Engineering: Kafka, PostgreSQL, MySQL, Cassandra, MongoDB, Neo4j, Redis, Elasticsearch, Prometheus, Grafana, Kibana

PROFESSIONAL EXPERIENCE

Software Developer | Ecohome.one, Remote, US

Aug 2025 - Present

- Built and optimized **scalable full-stack systems and RESTful APIs** using **Node.js, React, MongoDB, AWS and Cloudflare**, ensuring high performance, reliability and seamless frontend-backend integration.
- Integrated **AI and LLM models** to automate workflows and deliver personalized user experiences.
- Architected **cloud-native microservices** focused on scalability and cost efficiency, reducing infrastructure spend by **25%**.
- Collaborated with cross-functional teams to deliver **production-ready, user-centric solutions** on schedule.

Senior Software Developer | Comviva, Bengaluru, India

May 2021 – July 2023

- Directed a **cross-functional** engineering team of five, **mentoring** peers, conducting **architecture reviews**, and aligning engineering efforts with product goals, resulting in a **25% improvement** in **development velocity** and a **30% increase** in **code quality**.
- Led the **architectural redesign** of the MobiLytx Loyalty and Rewards platform, applying **Domain-Driven Design** to build **modular** services including Authentication and multi-channel notifications—**boosting system throughput by 60%** and **accelerating feature delivery by 35%**.
- Architected **high-performance** data pipelines using **Kafka** to enable **asynchronous event-driven communication**, reliably processing over **700K+** daily transactions with **sub-200 ms latency**, improving **transaction consistency by 50%**.
- Migrated infrastructure from on-premises systems to a **scalable, SaaS-based** cloud deployment using **AWS**. Introduced **centralized logging** and **product analytics** through the ELK stack, **reducing infrastructure costs by 40%** and **improving incident resolution speed by 80%**.

Software Developer | Comviva, Bengaluru, India

August 2019 – April 2021

- Delivered new features for the **campaign rules engine**, enabling personalized reward programs and **increasing user engagement by 20%**.
- Enhanced the Toll-Free Data Access system by integrating network traffic monitoring with **C and C++**, implementing **session management** through **Redis**, and developing **reverse-proxy** logic with **Node.js**, improving **session accuracy** and **service reliability by 25%**.
- Built and automated **CI/CD pipelines** with **GitLab CI, Jenkins** and **SonarQube**, API testing and behavior-driven development. **Increased deployment frequency by 40%** and **reduced production errors by 30%**.
- Integrated **Prometheus** and **Grafana** for **real-time system oversight**, **curtailing downtime incidents** by approximately **35%** and a **15% improvement** in mean time to resolution.

PROJECTS

Swarm Intelligence-Based Distributed Database System - Kafka, MongoDB, Docker Swarm, Prometheus, Grafana

2024

- Engineered a **scalable, fault-tolerant distributed database system** to ingest and process over **10 million** IoT data points daily using **Kafka** and **MongoDB sharding**, **ensuring 99.99% system availability**.
- Improved **query performance** by up to **45%** through AI-driven optimizations, applying **Ant Colony Optimization** for dynamic query routing and **Particle Swarm Optimization** for adaptive resource allocation.
- Automated deployments with **Docker Swarm** and set up **Prometheus** and **Grafana** to track system and node health, enabling **automatic node scaling** and supporting up to **5x traffic spikes** without **downtime**.

NetGuardian AI – Predicting Problematic Internet Use - Autoencoders, scikit-learn, Time-Series, Ensemble Models

2024

- Created an end-to-end machine learning pipelines to predict severity of problematic internet use using **high-dimensional actigraphy** time-series data, extracting actionable features from over **10,000** hours of behavioral signals through **autoencoders** and **statistical summarization**.
- Optimized model **accuracy by 20%** using ensemble learning techniques such as **boosting** and **bagging**, while applying **stratified cross-validation** to ensure consistent performance across diverse user groups.
- Fine-tuned **Quadratic Weighted Kappa** scoring to **enhance predictive stability**, achieving over **90% robustness** in severity classification and demonstrating strong generalization in real-world behavioral analysis applications.

Serverless Cloud Application for Face Recognition - AWS Lambda, S3, Docker, OpenCV, ResNet-34

2024

- Built an end-to-end serverless pipeline using **AWS Lambda** triggered by **S3** uploads and **Dockerized** ffmpeg for video frame extraction, successfully processing **1 GB+** videos automatically.
- Achieved **sub-500 ms** latency per frame and a **30% throughput boost** by deploying **ResNet-34** for face detection via **OpenCV**, enabling **real-time video inference** without managing servers.

EDUCATION

Master of Computer Science

May 2025

Arizona State University, Tempe, AZ

GPA: 3.77

Relevant Coursework: Statistical Machine Learning, Data Mining, Distributed Database Systems, Cloud Computing, Data Visualization

Bachelor of Engineering in Computer Science

May 2019

Bangalore Institute of Technology, Bengaluru, India

Relevant Coursework: Artificial Intelligence, Machine Learning, Advanced Databases, Unix System Programming, Data Warehousing & Data Mining

AWARDS & HONORS

Credo Cap Excellence Award, Comviva — Honored with the **unit-level** accolade for **outstanding performance** and **consistent technical excellence**.