

# Mithilesh Charan Perugu

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## EXPERIENCE

### Software Engineer (Backend)

July 2024 – Present

Chennai, India

Ford Motor Company

- Developed Central Shutdown Automation (CSA) using Java, Spring Boot, PostgreSQL and AWS; engineered an event-driven scheduling service to orchestrate VM lifecycle workflows, reducing cloud operational costs by 25%+.
- Built CERTMAN, a distributed SSL/TLS certificate renewal system using Java, Spring Boot, Python and Secret Manager; automated CSR generation, CA approval flows and expiry monitoring for 1000+ .ford.com certificates, ensuring zero-downtime renewals.
- Delivered Public Cloud AI Support (PCAS) backend service integrating Elasticsearch and DialogFlow; implemented scalable APIs handling 500+ daily queries with structured intent routing and knowledge retrieval pipelines.

### Software Engineer Intern

Jan 2024 – June 2024

Chennai, India

Ford Motor Company

- Engineered a high-throughput Flask REST service deployed on AWS, processing 10K+ JSON requests/hour with autoscaling, API monitoring and versioned rollouts.
- Developed full-stack automation tooling for service health checks; integrated JUnit, PyTest, Swagger and Apigee workflows, reducing MTTR and saving 100+ engineering hours in debugging and incident response.

## EDUCATION

### National Institute of Technology, Raipur

Raipur, India

B. Tech in Computer Science and Engineering (CSE) – 8.46 CGPA

Dec 2020 – June 2024

## TECHNICAL SKILLS

Languages: Java, C++, Python, SQL, Shell Scripting

Backend & Frameworks: Spring Boot, REST APIs, FastAPI, Flask, Node.js, Hibernate/JPA

Distributed Systems & Messaging: Apache Kafka, gRPC, WebSockets, Caching (Redis, In-Memory)

Databases: PostgreSQL, MySQL, MongoDB, Redis, Elasticsearch

Cloud & DevOps: AWS, GCP, Docker, Kubernetes, Terraform, Jenkins, CI/CD, Prometheus, Grafana

## PROJECTS

### Webhook Replay & Debugging System | Spring Boot, PostgreSQL, REST, Docker, AWS

- Designed a backend platform to capture, store and replay webhook events with idempotent retry logic, improving integration debugging visibility by **80%**.
- Enabled controlled replay of **900+ webhook events** with custom headers, delays and payload mutations to simulate real-world failure scenarios.

### Privileged Access Manager (PAM) | Python, PostgreSQL, REST APIs, Kubernetes, Terraform, GCP

- Developed scalable backend services implementing RBAC and modular policy enforcement for **800+ user roles** across cloud applications.
- Integrated **Just-In-Time - JIT** access automation to provision expiring privileges, reducing standing-access exposure by **85%** and improving security posture.

## ACHIEVEMENTS & CERTIFICATIONS

### Ford Ideathon Winner – Pull Request Review, Scan Automation

April 2025

Ford Motor Company

- Emerged as Winner for building an automated PR code review system using Python, GitHub Actions, GPT-4, integrating static analysis, security scans, and custom linting by reducing manual review time by 60% while ensuring adherence to code quality standards.

### GCP Associate Cloud Engineer Certification

Credly - c7f3e5ea-819f

Google Cloud

- Configured VMs, Clusters, Applications, IAM roles, and pipelines in GCP using Console, CLI & Terraform.