

MIHIR UMESHKUMAR PATEL

Lead/Senior Software Engineer

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Profile Summary:

Results-driven Senior Software Engineer with 7+ years of experience delivering scalable backend systems, microservices, and AI-driven automation. Skilled in Python, data engineering, and cloud-native architectures, with proven success in building ETL pipelines, streaming platforms, and secure APIs for enterprise environments. Adept at leveraging LLMs, RAG, and multi-agent workflows to accelerate automation and decision-making. Recognized for translating business needs into robust technical solutions that improve scalability, reduce costs, and drive innovation across financial and network operations domains.

Technical Skills:

Languages & Frameworks: Python, Go, TypeScript, FastAPI, Django, React, Next.js

Data & Messaging: PostgreSQL, MongoDB, Kafka, Airflow, Redis, Elasticsearch

Cloud & DevOps: AWS (EKS/ECS/EC2, S3, Glue), Docker, Kubernetes, OpenShift, Jenkins, GitHub Actions

AI/LLMs: LangChain, LangGraph, RAG, Function Calling, Agents, Prompt Engineering

Networking: Grafana, Dynatrace, NetBrain, Extrahop, Corvil, Cisco ACI

Other: CI/CD Pipelines, WebSocket, REST, gRPC, GraphQL, Shell Scripting

Professional Experience:

Senior Developer - RBC | June 2023 – Present

- Leading network automation initiatives, building intelligent validation and certification platforms that cut validation time from weeks to minutes.
- **Network Validation Platform:** Automated pre/post change checks across Cisco devices, reducing validation efforts by 95% and preventing “quiet failures.”
- **Device Certification Workflow:** Built RAG-based PDF ingestion + pytest generation pipeline, eliminating contractor costs and standardizing certification quality.
- **Enterprise Data Platform MVP:** Designed ETL pipelines (Airflow + Kafka) to ingest metrics from Grafana, Dynatrace, PostgreSQL, Elasticsearch into AWS S3, enabling real-time insights.
- **Multi-Agent Workflow Platform:** Developed LangGraph-based supervisor + sub-agent system orchestrating monitoring, troubleshooting, and automation tasks, reducing manual troubleshooting by 40%.
- Embedded solutions into change management workflows, enabling board-ready audit and compliance reports.

Senior Python Developer – CPPIB | July 2022 – June 2023

- Developed capital markets backend systems (Flask, Django, SQLAlchemy), improving transaction processing by 25%.
- Built REST APIs and middleware services across trading platforms.
- Migrated databases to AWS Data Fabric, cutting query times by 30%.
- Automated reporting workflows, saving 10+ hours weekly.
- Scaled deployments on AWS ECS/EC2 and Kubernetes with 99.9% uptime.

Full Stack Developer – CGI | March 2021 – June 2022

- Automated workflows with Python & Shell scripting, reducing manual tasks by 35%.
- Built CDC scripts for relational databases; automated AWS Glue ETL jobs with Lambda + Step Functions.
- Designed dashboards with React + Python, enabling real-time visualization of KPIs.
- Deployed microservices on Kubernetes integrated with CI/CD pipelines.

Python Developer – Kroger | August 2019 – Feb 2021

- Built PyQt modules for patient data management, enhancing usability.
- Developed Cassandra and CouchDB integrations for secure, scalable data storage.
- Automated AWS infrastructure with CloudFormation and Jenkins CI/CD, reducing release errors by 30%.

Key Projects:

Automated Network Validation & Certification Platforms

- Automated pre/post validation for Cisco NX-OS/IOS devices with AI summarization of diffs, reducing validation time from weeks → 2 minutes.
- Built certification workflow with PDF ingestion (RAG + prompt chaining), auto-generated pytest suites, and Allure reporting.
- Eliminated contractor costs, standardized reporting, and improved onboarding speed from weeks → minutes.

AI-Driven Multi-Agent & Chatbot Systems

- Developed LangGraph-based multi-agent workflow for monitoring, troubleshooting, and automation.
- Refactored monolithic chatbot into Kafka-based microservices, integrating RAG pipelines and MongoDB caching.
- Delivered a FastAPI + React full-stack chatbot platform with WebSocket notifications across Webex/Slack.

Enterprise Data Platform MVP

- Built ETL pipelines (Kafka + Airflow) to extract/transform metrics from Grafana, PostgreSQL, Elasticsearch, and Dynatrace into AWS S3.
- Enabled real-time visualization in Grafana dashboards, cutting data latency by 35% and improving anomaly detection.

Network Topology Mapping Platform

- Designed Airflow-based scheduling for daily device data collection and mapping.
- Integrated Neo4j to visualize dependencies and predict impact zones during change management.
- Improved incident resolution speed and proactive risk mitigation across enterprise networks.

Education:

Postgraduate Diploma – Sheridan College (2017 – 2019)

B.Tech in Electronics Engineering – Gujarat Technological University (2011 – 2015)

Certifications: AWS Solutions Architect – Associate | Certified Kubernetes Administrator (CKA) | AWS Cloud Practitioner (CLF-C02) | Elasticsearch Engineer | Advanced Python Programming (Coursera)