

# Raghunath Mahakud

GENAI ENGINEER

Bangalore, Karnataka, India

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## Summary

GenAI Engineer with 10+ years of IT experience, including 7 years as a Backend Java Engineer and 4 years in **Generative AI & NLP**. My technical skills include expertise in **Generative AI, Large Language Models (LLMs), NLP pipelines, RAG systems, Agentic AI**, and multi-agent architectures, along with proficiency in **LangChain, FastAPI, Prompt Engineering, GPT Family**, and **Python**.

Extensive experience in **distributed computing** — Microservices using **Spring Boot, Micronaut, Eureka, Kafka, Kafka Connect, Zookeeper, Event-Driven Development, Elasticsearch, Logstash, Kibana, Dynatrace, OpenShift, Docker, Kubernetes, Helm**. Proven ability to deliver production-grade solutions across enterprise clients in e-Government, automotive, IoT, and eCommerce domains.

## Education

### Birla Institute of Technology and Science, Pilani (WILP)

M.TECH (ARTIFICIAL INTELLIGENCE & MACHINE LEARNING) — EXPECTED: 2027

Rajasthan, India

2025 – Present

### C.V. Raman College of Engineering

B. TECH (ELECTRONICS & TELECOMMUNICATIONS ENGINEERING), CGPA-8.1/10

Odisha, India

2008 – 2012

## Technical Skills

- **GenAI:** LLM Fine-tuning, RAG Systems, Agentic AI, Multi-Agent Systems, LangChain, Prompt Engineering, LLM Function/Tool Calling, FAISS, Vector Databases, GPT Family, Agent Architectures, Polars
- **NLP:** Apache UIMA, OpenNLP, ClearTK, MALLET, Entity Extraction, Topic Modelling, Lemmatisation, TensorFlow, Information Retrieval
- **Languages:** Python, Java, SQL
- **Frameworks & Tools:** FastAPI, LangChain, Spring Boot, Micronaut, Docker, Kubernetes, Helm, Kafka, Elasticsearch, AWS, New Relic
- **Databases:** PostgreSQL, MongoDB, Cassandra, Oracle, FAISS
- **Testing & DevOps:** JUnit, Mockito, Karate, Robot Framework, Jenkins, Git, CI/CD, SonarQube

## Experience

### Pegasystems India Pvt. Ltd.

Bangalore, India

SENIOR SOFTWARE ENGINEER – DECISIONING & AI

Mar, 2022 – Present

#### Pega Autopilot

- Designed and built the **Autopilot AI assistant** within Pega, augmenting human capabilities through natural language processing and **LLM-driven task orchestration**.
- **Fine-tuned LLM models** with Pega-specific datasets, achieving improved accuracy for domain-specific task execution and context-aware user interactions.
- Developed **LLM function calling** and **tool-calling pipelines** using **FastAPI**, enabling precise execution of complex multi-step tasks.
- Built a **plugin architecture** with Assistants, Plugins, and Prerequisites components; implemented the **planner agent** for creating execution plans based on user goals and available capabilities.
- Incorporated **Polars** for optimised data processing and **LangChain** for orchestrating LLM workflows within the system architecture.

#### Text Analytics – NLP Platform

- Developed and maintained a production NLP platform for **topic detection** and **entity extraction**, serving enterprise

clients globally with high accuracy and **multilingual** support.

- Built text-analytics and **GenAI model gateway** microservices using **Micronaut**, enabling seamless integration between NLP models and downstream consumers.
- Improved model accuracy through lemmatization, char n-grams, and word bigrams; upgraded SVM-based models from LIBLINEAR to **LIBSVM** algorithm.
- Migrated all **Apache UIMA**, **OpenNLP**, and **ClearTK** libraries to 3.x versions; built TrueCase models in multiple languages.

### **Ericsson Global Services Pvt. Ltd.**

*Bangalore, India*

SENIOR SOFTWARE DEVELOPER

Jan, 2020 – Mar, 2022

#### **Device Management & IoT Communication (Client: SoftBank)**

- Designed and implemented **Usage Metrics** feature with **geo-redundant** setup for IoT device management, supporting firmware/software OTA upgrades, diagnostics, and monitoring.
- Built batch processing jobs using **Spring Batch**, **Cassandra**, and Spring Data JPA for large-scale device on-boarding and lifecycle management.
- Implemented **ELK stack** (Elasticsearch, Logstash, Kibana) for application and device event monitoring; developed alert and monitoring REST APIs using **Spring Boot**.
- Deployed microservices using **Kubernetes** and **Helm** charts with **Jenkins** CI pipeline; served as Security Master enforcing SRM Model compliance.

### **Mercedes-Benz Research & Development India**

*Bangalore, India*

SENIOR CONSULTANT

Nov, 2017 – Dec, 2019

#### **DuKe – Automotive Testing Platform (Client: Daimler)**

- Migrated a monolithic application to **microservices architecture** using **Spring Boot**, serving all Mercedes-Benz car testing across outdoor and interior functionality.
- Built event-driven microservices using **Apache Kafka** and Kafka Connect; implemented search engine using **Elasticsearch**.
- Containerised and deployed microservices using **Docker**, **OpenShift**, and **Kubernetes** with Gradle and Jenkins CI/CD pipelines.
- Built persistence layers with Spring Data JPA, Hibernate, **MongoDB**, and **PostgreSQL**.

### **CrimsonLogic Pte. Ltd.**

*Bangalore, India*

SENIOR SOFTWARE ENGINEER

Sept, 2015 – Oct, 2017

#### **IREMBO – e-Government Platform (Client: Government of Rwanda)**

- Developed and deployed multiple government services for Rwanda's one-stop e-Government portal, integrating services using **Apache Camel** and Messaging Gateway for external system interactions.

#### **Inferlytics – eCommerce Search Engine**

- Built an integrated eCommerce search and browse experience engine combining **NLP** and domain-specific knowledge bases using **Elasticsearch** and **MongoDB**.

## **Technical Certificates**

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OpenClaw Mastery for Everyone

*LevelUp Labs*

AI Evals for Everyone

*LevelUp Labs*

RAG Pack Certification

*Ragpack.ai*

Modern AI Pro – Practitioner

*Mitra Robot*

Generative AI with Large Language Models

*DeepLearning.AI*

NLP with Classification & Vector Spaces

*DeepLearning.AI*

Certified System Architect (CSA)

*Pegasystems*