

PARITOSH

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Education

Kalinga Institute of Industrial Technology, B.Tech in Computer Science	June 2023 – June 2027
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Experience

ONGC Summer Intern	May 2025 - July 2025
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- Worked on Rag Model and create automated work flows which lead to greater efficiency.
- Integrated Unstructured data and Structured data with OpenAI API

Research Intern (KIIT University)	Jan 2025 - Apr 2025
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- Conducted a comprehensive **Income Inequality Analysis** on 54 African countries (2000–2022) for the project: "Bridging the Divide: Macroeconomic Drivers of Economic Inequality in Sub-Saharan and Non-Sub-Saharan Africa."
- Applied **Principal Component Analysis (PCA)** for dimensionality reduction and performed in-depth correlation analyses on the derived components.
- Collaborated with co-researcher Pabak Pany under the mentorship of Dr. Muhammed Najeeb.

Projects

Multimodal RAG with Opensource Stack	github
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- Engineered a robust ingestion pipeline: parsed PDFs with **marker** and automatically enhanced context by leveraging the VLM(**qwen3-vl**) to generate descriptive captions for images.
- Established the core RAG stack, vectorizing enhanced documents with **bge-large-en-v1.5** and storing them in **ChromaDB** for efficient retrieval and response generation via **gpt-oss:120b**.
- Integrated a comprehensive user interface, including real-time voice input capability for natural language querying.

IoT Server with HTTP Communication

- Built a low-latency IoT server using Node.js and Express.js to handle HTTP GET/POST requests over Ethernet, reducing response time by 70% and logged sensor data into MySQL.

Wi-Fi Authentication Script for KIIT Students	github
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- Addressed the frequent connectivity issue faced by students transitioning between hostel and campus Wi-Fi. Optimized the process to reduce reconnection time from 1.5 minutes to approximately 4.5 seconds (potential for 2.5 seconds).

Certifications

AWS Cloud Quest: Cloud Practitioner	View Credential
Postman API Fundamentals Student Expert	View Credential
Data Engineering Virtual Intern	View Credential

Technologies

Languages: JavaScript | Python | Powershell

Technologies: MYSQL | AWS RDS | AWS EC2 | Langchain | Postman