### Mahika Jain

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#### **EDUCATION**

The LNM Institute of Information Technology (LNMIIT)

B. Tech in Computer Science and Engineering, CGPA: 8.10

Jaipur, India Aug 2022 - May 2026

Central Academy

Alwar, India
2022

Class 12th, CBSE Board - 96.6%

Silver Oak School

Alwar, India

Class 10th, CBSE Board - 96%

GATE 2025 (Data Science and AI)

AIR: 3947

JEE Exams

Mains Percentile: 97.3% (Top 3%), Advanced AIR: 17736

#### INTERNSHIP EXPERIENCE

DataTech Analytics

Jaipur, India

Dec 2023 - Feb 2024

Machine Learning Intern

- Developed generative AI workflows using Python and LangChain for document processing automation

- Implemented RAG pipelines with vector databases (FAISS, Chroma) and built Streamlit frontends
- Worked on ML models using TensorFlow/PyTorch and deployed on Google Cloud Platform
- Created prompt templates and LangChain agents for enhanced LLM interactions

#### TECHNICAL SKILLS

Languages: C++, Java, Python

AI/ML Frameworks: TensorFlow, PyTorch, LangChain, Scikit-learn

Web/Frameworks: Django, React, Tailwind CSS, REST API, Streamlit, Gradio
Databases: PostgreSQL, Vector Databases (FAISS, Chroma, Pinecone)

Tools: Git, VS Code, PyCharm, Jupyter Notebooks
Cloud & DevOps: Google Cloud Platform (GCP), API Integration

AI Specialties: RAG, Prompt Engineering, Generative AI, LLM Applications, Network Graph Visualization

#### PROJECTS

# **AI-Powered Legacy System Migration Assistant**

Python, LangChain, RAG, Vector Databases, Streamlit
- Built an AI solution for automating Oracle to PostgreSQL migration analysis and planning

- Implemented RAG pipeline using vector databases to process legacy system documentation
- Developed LangChain agents for automated code assessment and migration recommendations
- Created interactive frontend using Streamlit for real-time migration progress tracking

### **Generative AI Workflow Optimization Platform**

github.com/mahik-j/generative-workflow-optimizer

github.com/mahik-j/ai-migration-assistant

Python, LangChain, TensorFlow, GCP, REST API

React, Tailwind CSS, WebSockets

- Designed and implemented generative AI workflows for enterprise transformation projects
- Integrated multiple LLMs with custom prompt templates for domain-specific task automation
- Built RESTful APIs for seamless integration with existing enterprise systems
- Deployed scalable solution on Google Cloud Platform with proper monitoring and logging

# Mocktopus – Peer-to-Peer Mock Interview Platform

- Built a Django-inspired real-time interview platform supporting authentication, scheduling, and collaborative coding

- Integrated video calling and real-time peer interaction using WebSockets
- Focused on responsive and smooth UI with React and Tailwind, currently extending backend services and deployment

### Model-Oriented LTS – ML-based Intelligent Transportation System

github.com/mahik-j/intelligent-transport-system

github.com/mahik-j/mocktopus

Python, TensorFlow, XGBoost, TF-IDF, SMOTE, Ensemble Models

- Built a machine learning system to classify dialogues in Traffic scenarios enhancing communication in Intelligent Transportation Systems (ITS)
- Implemented and benchmarked 5+ ML models from Logistic Regression to advanced 86.05% accuracy Tree Classifier
- Engineered a complete ML pipeline with TF-IDF vectorization, SMOTE augmentation, and ensemble-based evaluation

# **Enterprise RAG Document Processing System**

Python, LangChain, Vector Databases, FastAPI

- Developed advanced RAG system for processing enterprise documents with multi-modal support
- Implemented custom vector embedding strategies using multiple vector databases (FAISS, Chroma)
- Built efficient document chunking and retrieval mechanisms for large-scale document processing
- $\hbox{-} Created REST \hbox{ful APIs using FastAPI for seamless integration with enterprise applications} \\$

# **Bug Tracking System**

Django, React, PostgreSQL, REST API

- Developed a full-stack bug tracking platform with role-based access for admins, developers, and testers
- Built RESTful APIs in Django for secure communication with a React-based frontend
- Implemented comprehensive project and user management with PostgreSQL database integration

### POSITIONS OF RESPONSIBILITY

AI/ML Lead, CodeSoc LNMIIT:

Led AI/ML workshops and mentoring initiatives.

Coordinator, Gender Cell LNMIIT:

Organized events promoting gender equality and awareness.

# AWARDS AND HONORS

2nd Place – Ideation Competition: Won 2nd place in Literary Intra-College Ideation Competition.

 $\textbf{Finalist} - \textbf{Rajasthan Police Hackathon:} \ \text{Recognized for innovative solution in state-level competition.}$ 

Pupil – Codeforces: Competitive programmer with 'Pupil' rank on Codeforces.

AI/ML Excellence Award: Recognized for outstanding performance in machine learning internship projects.

github.com/mahik-j/bug-tracking-system