# Midhun Prahash SR

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## Summary

I like training and partnering with machines to solve the majorly faced challenges, which in turn revolutionize industries, enhance efficiency, and drive innovation.

### Education

B.Tech - Artificial Intelligence & Data Science,

Expected - 2027

St.Joseph's Institute of Technology

SGPA:8.4

High School,

Excel Central School

HSC: 89 %

# Work Experience

## **Project Assistant**

Excela 3.0 Alpha (Interactive Humanoid Robot)

December 2024-January 2025

Ai & Robotics Lab, Excel Group of Schools

• Designed and demonstrated a humanoid robot integrated with the ChatGPT API, enabling real-time human interaction and dynamic query resolution using advanced NLP techniques.

# **Projects(Working on/Finished)**

#### Predictive CrimeSpot analysis & Deployment Suggestion Application-(TIME SERIES FORECASTING)

- · Built a crime trend prediction system using ARIMA time-series forecasting to forecast incidents across Thoothukudi district.
- Developed a dynamic risk-level mapping app to guide police force deployment in real-time.
- Integrated Python, Pandas, and interactive dashboards to visualize trends, enabling proactive law enforcement decisions.

#### StudentAi - (RAG & LLM)

- · Developed an AI-powered educational assistant using Retrieval-Augmented Generation (RAG) to extract key concepts from school textbooks and generate 'Why? What? How?' explanations for easier student learning.
- Implemented FAISS vector database for efficient document chunk storage and similarity search, enabling fast and accurate content retrieval.
- Integrated LangChain framework to orchestrate the RAG pipeline and used OpenAI GPT APIs for generating natural language explanations, improving student engagement and comprehension.
- · Built the web interface using Streamlit, delivering an interactive app that personalizes answers based on student queries.

#### Ai Integrated Smart Mirror- (COMPUTER VISION)

- Designed and developed an AI-powered smart mirror using YOLO v8 object detection to track real-time hair density.
- Leveraged computer vision techniques to provide monthly hair density insights, enhancing user engagement in wellness.
- Applied Python, OpenCV, and YOLO v8, achieving high accuracy in real-time detection with optimized performance.

#### Flipkart-Product Review Visualizer- (NLP & SENTIMENT ANALYSIS)

· Scrapes the Flipkart's Product review and summarizes the overall customer impression on the product using NLP and provide a visualization of the impressions - (Finished)

## **Skills**

Programming Languages: Python, Java, SQL

Data Science: Time Series Forecasting, Data Visualization, Machine Learning,

Technologies: Computer Vision, Basics of LLMs, NLP, ARIMA, APIs, Langchain, RAG

Tools: Pandas, NumPy, Matplotlib, Scikit-learn

## Certifications

Data Science Methodology - https://courses.cognitiveclass.ai/certificates/30720c84c6874a1783604880aefdb97a Python 101 for Data Science - https://courses.cognitiveclass.ai/certificates/202c332650394476875dcd912b5815b0

Data Science a-z - https://ude.my/UC-bc67920a-0176-426d-862b-3d31a85efib

SQL and Relational DataBase 101 - https://courses.cognitiveclass.ai/certificates/93085e4a9b8b4fed872d8eb5a9f816d0 SqL basics - https://www.skillrack.com/faces/free/certificate.xhtml?t=cert&id=482693&key=FFY

## **Achievements**

## Runner-Up (Top 2 out of 800+ Teams) at Thoothukudi District Police Hackathon(CYBER HACKATHON -2025)

- Won ₹25,000 for developing a data-driven crime prediction and police deployment solution.
- Recognized for innovative use of the ARIMA algorithm and real-time analytics to support proactive policing.