NIRAJ KUMAR

IIT Madras
B.S. Degree

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SUMMARY

Data science enthusiast with a strong foundation in Python, Machine Learning, and statistical analysis. Experienced in developing interactive dashboards and backend systems, eager to apply skills in real-world AI projects.

EDUCATION

Indian Institute of Technology, Madras   Chennai, Tamil Nadu
Degree Level - Bachelors in Data Science and Applications   *Jan. 2021 – Present*
St. Xavier's College, Ranchi   Ranchi, Jharkhand
Bachelors in Physics Honours   *Sept. 2020 – May 2023*
DAV Public School, KoylaNagar   Dhanbad, Jharkhand
Science - Non Biology   *June 2017 – May 2019*

INTERNSHIPS

Python Developer   May 2024 – July 2024
qapp.ai   *Remote*
- Developed Backend core logic for the RAG application using Python
- Designed User Interface using Streamlit

PROJECTS

AI Agent for Academic Guidance | *FastAPI, LangChain, FAISS, Python, Groq API, Google API, Render, LLM*
- Led development of RAG module using LangChain, FAISS, and LLMs for intelligent content retrieval and generation
- Integrated Groq API for LLM inference and Google APIs for real-time processing
- Deployed combined RAG+LLM services on Render for scalable backend integration

Household Services Application | *Flask, SQLite, Redis and Celery, Vue3(CLI) , Bootstrap*
- Developed a full-stack multi-user web app to support home service bookings for admins, customers, and service providers.
- Designed and implemented RESTful APIs for user management, service requests, and admin controls; integrated SQLite for storage and Redis with Celery for background task management.

Smart Home Security System | *Python, OpenCV, face-recognition, Pickle*
- Led software development for the facial recognition system, working closely with the electronics team.
- Implemented image encoding and managed the database for captured images.

Movies Review Sentiment Analysis | *EDA, ML Models, Kaggle Platform*
- Conducted data cleaning, preprocessing, and exploratory data analysis (EDA)
- Implemented various ML models and evaluated accuracy rates on Kaggle platform

Music Streaming App | *Flask, JINJA, HTML, CSS, Python, SQL*
- Developed a web application using Flask.
- Functionality: User/Admin login, Songs/playlist add/removal

TECHNICAL SKILLS

Languages: Java, Python, SQL (Postgres), JavaScript, HTML/CSS
Frameworks: Flask, FastAPI, VueJs
Developer Tools: Power BI, Git, VS Code, Vercel, Render, Celery, Redis
Libraries: pandas, NumPy, Matplotlib, Scikit-learn, OpenCV, LangChain, FAISS, face-recognition, pickle
APIs/Services: Google APIs, Groq API

VOLUNTEERSHIPS

Marketing and Outreach - PIWOT'23   Sept. 2023 – Dec. 2023
PanIIT Organisation   *Remote*
- Managed Social Media outreach

Student Relation - IITM fest Paradox'23   May 2023
IIT Madras
- Managed the registration desk, overseeing the registration process for over 3,000 students.
- Operated the help desk, addressing and resolving campus issues during the 5-day fest.

EXTRA-CURRICULAR ACTIVITIES

- Marathon - CCL Ranchi Marathon (5km/10km/21km)
- Poetry
- Badminton