Niranjan Kumar

AI Engineer

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Skills

- **Languages** : Python, SQL, Java
- **Frameworks** : Tensorflow, Scikit-learn, Flask, Keras, PyTorch
- **Data Analysis & Visualization** : Numpy, Pandas, Matplotlib , Seaborn
- **Other Skills** : Natural Language Processing(NLP), LLM(Hugging Face), Deep Learning, Machine Learning: Regression and classification algorithms (Logistic Regression, SVM, KNN), Tree-based algorithms (Random Forest, Gradient Boosting, XGBoost), GIT, Docker, Web Scraping, Data Structures and Algorithms, Time Series, Recommendation System, Statistics, Probability, and Hypothesis Testing , Linux, AWS, Generative AI

Experience

Software Engineer II (Machine Learning) Jan 2023 - Nov 2024

Smarthub.ai Banglore

- Engineered and deployed **Python-based adapters and simulators**, integrating over **10,000+** IoT devices on **Azure** and **AWS**, resulting in a **30% reduction in system downtime**.
- **Implemented clustering of IoT device alerts** using **unsupervised learning and NLP**, enabling faster anomaly detection, improving alert response times, and enhancing customer satisfaction by 25%.
- **Implemented robust data management strategies** that improved operational efficiency by 40%, contributing to a more reliable and responsive IoT ecosystem.
- **Developed an intelligent question-answering chatbot** for IoT device user guides, leveraging **GenAI** tools like **LangChain** and **GPT**, with **ChromaDB for local vector storage and Pinecone for scalable vector search**.

Jr. Software Engineer Dec 2021 - Oct 2022

Zensar Technologies Banglore

- Executed **web scraping projects using Python**, extracting critical data that enhanced business intelligence and increased client satisfaction by 20%.
- Engineered and optimized **SQL**-based data storage systems, reducing query response times by 15% and accelerating project delivery timelines by 10%.
- Implemented **data visualization** tools that provided actionable insights, leading to a 25% increase in decision-making efficiency.

Projects

Conversational Text Summarization Using T5 Transformer

https://github.com/niranjan-17/text-summarization

- **Problem Statement:** Extracting concise and meaningful summaries from multi-turn conversations is challenging.
- **Solution:** Fine-tuned a T5 Transformer model on the SAMSum dataset, achieving 95% accuracy in conversational summarization.
- **Impact:** Enhanced user experience by providing precise summaries via a scalable Streamlit web app containerized with Docker.

Tech Stack: Python, TensorFlow, Hugging Face Transformers, Streamlit, Docker, Pandas and NumPy

Book Recommendation System
https://github.com/niranjan-17/book-recommendation-system

- **Problem Statement:** Users struggle to find personalized book recommendations due to generic suggestion systems.
- **Solution:** Built a collaborative filtering-based recommendation engine with 93% accuracy, integrated into a scalable Flask web app.
- **Impact:** Increased user engagement by implementing dynamic, community-driven trending book lists.

Tech Stack: Python, Flask, NumPy, Pandas, Scikit-learn, Numpy, Pandas, Matplotlib, Seaborn and Docker

Financial Stock Analysis using LlamaIndex
https://github.com/niranjan-17/GENAI_Stock_Analysis_LlamaIndex

- **Problem Statement:** Extracting valuable insights from financial reports and articles is time-consuming and inefficient.
- **Solution:** Developed a Streamlit web dashboard using LlamaIndex and GPT-4, enabling real-time querying through a vector-based document retrieval system.
- **Impact:** Enhanced financial research and decision-making by automating data ingestion, preprocessing, and intelligent analysis.

Tech Stack: Python, LlamaIndex, OpenAI GPT-4, Streamlit, Docker, NumPy and Pandas.

Multiple Disease Prediction System
https://github.com/niranjan-17/Multiple_Disease_Prediction_Systen

- **Problem Statement:** Early detection of diseases like Diabetes, Heart Disease, and Parkinson's is crucial for timely intervention.
- **Solution**: Developed an interactive Streamlit web app that uses ML models (SVM, Logistic Regression) for real-time disease prediction, achieving 87% accuracy.
- **Impact:** Enabled users to assess health risks efficiently, with automated data ingestion and inference for seamless experience.

Tech Stack: Python, Scikit-learn, Streamlit, Docker, NumPy, Pandas and Pickle

Education

Scaler 2025
Specialized in Data Science & Machine Learning

- Mastered machine learning, deep learning, data analysis techniques (including probability, statistics, hypothesis testing, and EDA), and data structures and algorithms, with practical experience in model building, deployment, and problem-solving.
- Completed an advanced NLP and Large Language Models (LLM) course, acquiring expert-level knowledge in AI techniques and their real-world applications, showcasing a strong command of cutting-edge AI advancements

University Institute Of Technology, Burdwan 2021
BE/B.Tech/BS in Information Technology