Pranamya Jain

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Education

Ramaiah Institute of Technology **2022 - 2026**

B.E in Artificial Intelligence and Data Science *8.22/10 CGPA*

Work Experience

Infosys Springboard **November 2024 – January 2025**

Project AI Intern *Remote*

- Built a medical **image processing pipeline** for disease diagnosis, using **OpenCV** for preprocessing and **Gaussian filters** for image enhancement. Feature extraction involved **GLCM** for texture, contour analysis for shape, and color histograms for color features, all visualized with **matplotlib** and **skimage**. A **RandomForestClassifier** trained on these features achieved high classification accuracy, evaluated via a **split-test approach.** The pipeline, built in **Python**, utilized **sklearn** for machine learning and **joblib** for model serialization, enhancing diagnostic accuracy and efficiency in medical imaging.

Anuyog Softwares and Solutions **March 2025 – Present**

Machine Learning Intern *Remote*

- Applying **machine learning** algorithms to classify tree species based on leaf image analysis. Utilizing **Python libraries** OpenCV, Scikit-learn, TensorFlow for image preprocessing and feature extraction. Implementing and assessing the performance of multiple **ML models**, including **KNN**, **SVM**, and **CNN**. Currently achieving a high accuracy of 8.678 in image classification tasks. Optionally contributing to the development of a Flask web interface for user interaction.

Projects

Full Stack AI Report Generating Agent - Flask, Pandas, PyTesseract, OpenAI, PyPDF2, Matplotlib, ReportLab Source Code

- Developed an AI-powered Flask application automates **comprehensive report generation** across diverse domains (financial, stock, research, etc.). It handles file uploads, extracts text (OCR and PDF), and processes data for **insightful visualizations.** Leveraging **OpenAI** and a custom **Llama Index**, it performs intelligent text analysis and information retrieval. Finally, it compiles **structured PDF reports** with AI-driven **Retrieval-Augmented Generation** content and data visualizations, streamlining the reporting process.

Intelligent Book Recommendation System with Emotion based Matching - NLP, Transformers, KeyBERT Source Code

- Developed an intelligent **book recommendation system** leveraging **Natural Language Processing (NLP)** and advanced similarity metrics. Analyzes the **emotional tone** of user-read books using Transformer models and identifies new books with **similar emotional profiles**. Employs **KeyBERT** for keyword and content relevance scoring across diverse categories: self-help, psychology, philosophy, and personal development. Implements a smart fallback mechanism to recommend books by the **same author** when strong matches are unavailable, enhancing personalization. Potentially building a user-friendly web interface using Flask to provide interactive book recommendations.

Personalized Investment Portfolio Advisor- Flask, yfinance, NumPy, Pandas, Matplotlib, Seaborn, sklearn, Groq Source Code

- Implemented **"Enhanced Portfolio Analysis,"** a web application for optimizing investment portfolios using real-time stock data from **yfinance** and statistical models. This application processes data with **NumPy and Pandas**, applies statistical analyses with scipy, and scales inputs using **sklearn's MinMaxScaler**. It features **Groq's LLM** for advanced portfolio analysis, providing **risk assessments** and **investment recommendations** tailored to user-defined parameters. Visualizations are generated using **Matplotlib and Seaborn**, aiding in the interpretation of complex data through graphical representations. Built on the **Flask framework**, it offers a secure, scalable, and user-friendly interface for interactive **financial analysis** and decision-making support.

Technical Skills

Coursework: Data Structures Algorithms , Operating Systems, Database Storage Systems, Data Science, Machine Learning, Generative AI
Languages: Python, C , R, CUDA (GPU Programming)
Data Analysis: Pandas, NumPy, Matplotlib, Seaborn
Developer Tools: VS Code, Pycharm, Jupyter Notebook, Google Colab, GitHub
Soft Skills: Communication, Problem Solving, Proactive Attitude, Critical Thinking, Leadership, Time Management, Creativity, Adaptability

Activities and Extracurricular

- **E-cell - Core Team Member - *Official Entrepreneurship Club in College*** Member in Upstarters at the Entrepreneurship Cell, responsible for overseeing the incubation of startups and promoting entrepreneurial growth through mentorship and resource allocation.
- **IEEE- Core Team Member - *Official Technical Professional Organization's Club in College*** Member in CIS, responsible for driving initiatives in computational intelligence, overseeing projects, and enhancing member engagement through workshops and seminars.