Piyush Choudhari

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Technical Skills

- Languages: Python, Java, SQL.
- API Development: FastAPI, Flask, Spring Boot, Postman, Insomnia.
- Data Analytics: Excel, PowerBI, Tableau.
- Databases: Sqlite3, PostgreSQL, MySql, MongoDB, ChromaDB.
- CI/CD: GitHub Actions, Docker, Render, Vercel.
- Version Control: Git, GitHub.

Projects

RecycleNet18 - GitHub (ResNet18, LLMs, Pytorch, Huggingface, PEFT, QLoRA, FastAPI, Render, Docker)

- Architected and deployed an **image classification model** using a **pretrained ResNet18 CNN** and **trained a custom prediction head** for classification across **30 distinct recyclable categories** including plastics, metals, and organic waste attaining **90% training** and **83% testing** accuracy.
- Created a **FastAPI server** to allow clients to draw inference from the image classification model. Deployed the system to the **Render platform** inside a **Docker Runtime**.
- Implemented an AI chatbot with a **custom fine tuned Gemma-1.1-2b LLM**, trained on corpus of **major recycling guidelines** of India using **QLoRA method** to chat with and provide real-time recycling guidelines and environmental best practices.

Mars Weather Data ETL Pipeline - GitHub | Video Link (Java, MongoDB, MySQL, Docker Compose, API Integration, Apache Airflow)

- Built an automated ETL pipeline in Java to fetch and process Mars weather data from NASA's InSight API, storing it in MongoDB with 99.9% uptime.
- Created an interactive **Dash-powered dashboard** to visualise critical metrics like **pressure**, **temperature**, **and wind patterns** for data-driven insights.
- Automated the entire workflow with Apache Airflow DAGs and containerized the application using Docker Compose, integrating services like PostgreSQL and Web Servers GUI for seamless operations.
- Transformed **MongoDB data into structured SQL tables** with dynamic schema creation in **MySQL**, improving data analysis and accessibility.

Pokedex API - GitHub | Video Link (RestAPI, FastAPI, PostgreSQL, Neon DB, Docker, Web Scraping)

- **Developed** a scalable **RESTful API** to query data on **1,015 Pokemon**, enabling query by attributes like name, species, type, size, and abilities.
- Scraped data from www.pokemondb.net, exporting to CSV and storing it in a PostgreSQL database hosted on Neon DB on AWS
- Published the dataset on Kaggle, receiving 1,200+ downloads and 5,000+ views as an open source dataset.
- Utilised **FastAPI** as the backend server. **Containerized the API with Docker** and optimised to get less than **100ms response times.**

Achievements

- 1st Rank In Software Category At SIH Internal College Hackathon.
- 2nd Rank At Data Visualization Hackathon- Organised by ISA Club, D.Y.Patil College Of Engineering.
- 4th Rank At Visionary Hackathon- Organised by Vishwakarma University And Binghamton University, New York.

Leadership

- **Al&ML Lead At IASC Club** Organized a bootcamp for 70+ peers, covering topics like VCS, Git, Github, Open Source. Link.
- **AI&ML Coordinator At IASC Club -** Conducted a 3-day GenAl Workshop for 120+ students, receiving 100+ positive student feedbacks. Link.

Certifications

- IBM Data Science (Coursera) Link.
- Complete Data Science, Machine Learning, DL, NLP Bootcamp (Udemy) Link.

Education