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 | Demo Video Link *(ResNet18, LLMs, Pytorch, Huggingface, PEFT, LoRA, 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 **LoRA method** to chat with and provide real-time recycling guidelines and environmental best practices.

Mars Weather Data ETL Pipeline - GitHub | Demo Video Link (*Java, MongoDB, MySQL, Docker Compose, 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 | Demo 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

- **AI&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 GenAI 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

D.Y.Patil College Of Engineering, Akurdi   *2022-2026*

Bachelor of Engineering in A.I.D.S(CGPA of 8.37)   *Pune, Maharashtra, India*