Ayush Verma

Lucknow, India

ayushvrma08@gmail.com https://ayushvrma.github.io/ ayushvrma ayushvrma

Education

Thapar Institute of Engineering and Technology **CGPA: 8.56/10**

Bachelor of Engineering in Computer Science and Business Systems *Sep. 2020 – May 2024*

Experience

Spyne.ai **Jan 2024 – Present**

Computer Vision Engineer / Applied AI Researcher *Gurugram, Harayana*

- Working on BGBuilder leveraging Stable Diffusion, Lora, InstructPix2Pix
- Worked on img2img problems using Pix2PixHD and U2Net
- Built pipelines that enable pre-processing data to deploying on Triton Inference Server

Diool **March 2022 – September 2022**

AI/ML Intern *Cameroon (Remote)*

- Conducted analysis of the African financial market to provide customizable Buy Now, Pay Later (BNPL) payback schemes for customers.
- Generated synthetic data to enhance model training and performance.
- Worked with Trumania simulations to create market simulations for research purposes.

University of South Carolina **June 2023 – December 2024**

Research Intern *Remote*

- Created a novel Aphasia identification pipeline
- Utilized LLMs and Numbatch Embeddings for baseline establishment.
- Leveraged FAISS for embeddings matching

Projects

Repository Complexity Analyzer| *Flask, Prompt Engineering, Langchain* **June 2023**

- Utilized GitHub API to extract repository data and employed Prompt Engineering for advanced analysis.
- Leveraged Flask for efficient backend implementation of the repository complexity analysis system.
- Identified and categorized complex repositories of designated users using Langchain.

Style Transfer | *Flutter, Pytorch, ngrok, Flask, Python* **May 2021**

- Created a Flutter Application utilizing PyTorch and Convolutional Neural Networks (CNNs) to implement style transfer between images.
- Employed Flask for seamless backend functionality and utilized ngrok for secure tunneling.
- Produced a user-friendly app capable of generating final images by transferring styles from one image to another.

License Plate Recognition | *Pytorch, Flask* **December 2022**

- Engineered a License Plate Recognition system using Convolutional Neural Networks (CNNs) in PyTorch.
- Implemented Flask to create a seamless and responsive web application for license plate recognition.
- Utilized a specific dataset to train the model, enhancing its accuracy and performance. Dataset used: Indian Number Plates Dataset

Digital Vehicle | *Flutter, Postgres, Beekeep Studio, Android SDK, Android Studio* **Febuary 2022**

- Developed a user-friendly mobile application to streamline and digitize processes at the RTO Office.
- Integrated Postgres database management system (DBMS) to enable efficient data storage and retrieval.
- Implemented a dual-login system, allowing users to register vehicles, view registration certificates (RC), and access challan information, while enabling police personnel to view RC details and apply challans seamlessly.

Open Sourced Contributions

Letter of Recommendation| *Pytorch, Python* **October 2023**

- Took lectures on CNNs and Feature-based Sketch-Photo Matching.

Guide to GANs| *Pytorch, Torchvision, Python* **January 2022**

- Created a guide for beginners on implementing Generative Adversarial Networks (GANs).
- Covers diverse GAN architectures in the Pytorch framework.

OpenCV Tutorial | *Python, OpenCV* **February 2021**

- Crafted a tutorial aimed at beginners, emphasizing image manipulation techniques.
- Provides hands-on learning experience using the OpenCV library in Python.

Leadership / Extracurricular

Carbon Shunya **May 2024**

Paid Project *Delhi, India*

- Designed and developed a PostGres database for the WebUI
- Designed and implemented the backend in fast-api.
- Project Planning and Product prospective planning.

Developer Student Clubs **September 2021 – July 2022**

Co-Lead *Thapar Institute of Engineering and Technology*

- Led Google Developers Student Club initiatives, organizing and collaborating with **Weights&Biases**, **Devfolio**, and **IBM** for informative sessions.
- Successfully managed a 50-member team to host major events: Thapar University Society Fair 2021, Digital Village Hackathon 2022, and Chimera 2022.
- Demonstrated leadership and partnership skills in coordinating brand activities and driving engaging Deep Learning bootcamps within the university community.