Kartik Swaroop Dhiman

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SKILLS

Languages and Scripting - Python, C, C++, JavaScript(Beginner), Rust, HTML
Frameworks and Libraries - FastAPI, Flask, Tensorflow, Scikit-learn, LangChain, Pytorch, DVC
Databases and Tools - MongoDB, PostgreSQL, Pinecone, Postman, Git, MCP Servers, Cursor
Systems - CUDA, WSL(Ubuntu), API Development, GPU Deployment
Domains - Machine Learning, Computer Vision, EDA, Data Structures, Backend Development, GenAI, LLM

EDUCATION

Ajay Kumar Garg Engineering(2021-2025) **Ghaziabad, UP**
Bachelor of Technology, Computer Science and Engineering

Nehru World School(2018-2020) **Ghaziabad, UP**
High School, PCM Percentage - 93.2%

EXPERIENCE

Machine Learning Engineer Intern - Jupiter AI Labs(Noida, Onsite) 14/05/2025 to present

- Developed an OCR api that can bypass the captchas of length 4 to 6 characters. Improved the accuracy of the previous system, which previously had an accuracy of 85%. Run the model on my GPU using CUDA and PyTorch.
- Implemented an API wrapper in Rust around the OCR model using Serde for efficient serialisation and deserialisation. The API accepts image URLs as input and returns structured JSON responses.

IBM Skillbuild Summer Internship - CSRBOX(Virtual) - *LINK* 25/06/2024 to 05/08/2024

- Developed and deployed a blog RESTful API for this project with Python. The API is connected to the database. API calls the database to store and retrieve the information about the blog.
- The repo*(LINK)* contains the code for the blog API implementation.
- The technologies used in this API are Python, FastAPI, and a database(MongoDB).

PERSONAL PROJECTS

Website Blocker Chrome Extension*(LINK) Tech Used - Python, FastAPI, Javascript, Typescript, Tensorflow*

- Automatically blocks distracting websites to help users stay focused and productive.
- Used CNN (MobileNetV2 is built on CNN) + some layers on website screenshots to categorise sites as productive or unproductive.
- When users attempt to access an unproductive website, the extension provides user-friendly warnings and blocks that website.

Fake News Detector*(LINK) Tech Used - Python, FastAPI, Data Version Control, Scikit- Learn, git(version control), JSON, Jupyter Notebook, etc.*

- The user can select the news headline, and the detector will indicate if the news is fake or legitimate.
- The project uses the Random Forest model(Tree Model), which is trained on the liar-liar dataset with ten thousand different news headlines and covers.
- To map the data flow during training, I have used Data Version Control. The model gives approximately 83% accuracy.

Bioacoustic Neural Inference for Avian Taxonomy *Tech Used - Python, CNN, Librosa, EDA.*

- A Research Project that finds the species of birds from their audio. A total of 182 birds can be classified using this model. Uses CNN as a machine learning model.
- The audios are first converted to a spectrogram with the librosa library, then they are passed to the Short-time Fourier transform, which decreases the noise in the bird's spectrogram.
- Performs 0.738 accuracy on 1000 random bird audio. This project is my final year project. This project gives an idea about the biodiversity of the birds of the Western Ghats.

MedChat*(LINK) Tech Used - Python, Flask, Langchain, Pinecone, Large Language Model, HTML.*

- A chatbot which uses the llama2 model from Huggingface to give medical suggestions. Also implemented voice search and web search using Google Web websearch api Serpapi.
- This project is fine-tuned on medical books and provides vital information about any disease the user may require.
- The user may also provide an image to identify the disease and find the proper cure for it. The user can also speak to the chatbot to ask a question, and the chatbot responds with an answer using web search or an LLM model.

CERTIFICATIONS

- **Machine Learning, Stanford University**
- **Python Certificate (Hackerrank)**
- **Machine Learning A-Z: AI, Python, R**