Gautam Dewasi

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Work Experience

Passionate **Machine Learning Engineer** with a strong focus on **NLP, LLMs, and AI-driven solutions**. Looking to apply my skills in **Python, Deep Learning, and Cloud ML** to build innovative and scalable AI applications. Excited about leveraging **LLMs and automation** to solve real-world challenges.

Skills

- **Languages:** C++, Python, Bash
- **ML & NLP Frameworks:** Numpy, Pandas, Scikit-learn, Tensorflow, Keras, NLTK, Langchain, LlamaIndex, Hugging Face Transformers
- **Data Visualization:** Matplotlib, Seaborn
- **Model Deployment:** Streamlit, Gradio, Hugging Face spaces
- **Tools & DevOps:** Docker, Git, Github, VS Code, Jupyter Notebook, Google Colab, MySQL, MongoDB
- **Core Concepts:** DSA (Data Structure and Algorithms), OOP (Object Oriented Programming), DBMS
- **LLM Specialization** : Vector Databases , LLM Fine-tuning , Prompt Engineering, RAG, Model Optimization

Projects

- **YouTube Summarizer(Link) :-** ***Python, Hugging Face Transformers, Streamlit, YouTube API, NLP***
  - Developed an **AI-powered YouTube video summarization tool** using **NLP and Transformers** to generate concise summaries of video content.
  - Integrated **YouTube API** to extract transcripts and applied **state-of-the-art language models** for text processing and summarization.
  - Built an interactive **Streamlit-based UI**, enabling users to input video URLs and receive structured summaries efficiently.
- **ArXiv Researcher Agent (Link) :-** ***Python, LangChain, OpenAI API, LlamaIndex, Streamlit, NLP***
  - Built an **AI-powered research assistant** that retrieves and summarizes **ArXiv** research papers using **LLMs and NLP techniques**.
  - Integrated **LangChain and LlamaIndex** to efficiently search, parse, and extract key insights from academic papers.
  - Developed a user-friendly **Streamlit UI**, allowing users to input queries and receive AI-generated research summaries.
- **Gesture-Based System Sound Control (Link) :-** ***Python, OpenCV, MediaPipe, Deep Learning, NumPy***
  - Developed a **gesture-controlled system** to **adjust volume and control media playback** using **hand movements** detected via a webcam.
  - Implemented **OpenCV and MediaPipe** for **real-time hand tracking and gesture recognition**.
  - Enabled seamless **contactless interaction**, improving accessibility and user experience in multimedia applications.

Work Experience

Rebhu Computing — March 2024 - May 2024

Computer Vision Intern — Greater Noida, India

- **Build Python Package Related to GST Streamer**.
  - Developed a **Python package** using **GStreamer** to extract video frames from multiple RTSP streams for **enhancement and object detection**.
  - Integrated **OpenCV & YOLO** for real-time object detection and optimized GStreamer pipelines for high-performance video analytics.
  - Fixed critical bugs in the company's GStreamer-based package, improving **stability and streaming efficiency**.

Education

Uttarakhand Technical University , 2019- 2023

Bachelor of Technology, Information Technology
CGPA: **7.1**

Certifications

- **Machine Learning Onramp** – MathWorks (Jan 2024)
- **Azure Machine Learning Development (Part 1 & 2)** – LinkedIn Learning (May 2023)
- **TensorFlow: Working with NLP** – LinkedIn Learning (May 2023)
- **Python 101 for Data Science** – IBM (Sep 2022)
- **Machine Learning to Deep Learning: A Journey for Remote Sensing Data Classification** – ISRO (Jul 2022)