PRABHUDAYAL VAISHNAV

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 Portfolio Website

WORK EXPERIENCE

• Research Internship : ESIEA Paris, France (Remote)　　　　　*January 2025 - Present*

Working on the "Complex Human Emotion Detection Using YOLO11" research project.

- Enabled real-time detection of 22 discrete human emotions by training on the CFEE dataset using YOLO11.
- Fine-tuned YOLO11 (COCO-pretrained) using transfer learning for real-time emotion detection.

PROJECTS

• The AI Scientist: Sakana AI　　　　　*Python, LLMs, Transformers, Git*

Contributed to Sakana AI's Open Source project to Automate the Scientific Research.

- Added 8 open-source language models, achieving a 75% reduction in generation costs.
- Adapted the model for compatibility with T4 GPU, moving away the dependency on high-end GPUs like H100/A100.
- Released a research paper titled "*Exploring Style Transfer with Small Character-Level Transformers*", utilizing the Qwen2.5(72B) language model.

• Development of Python Module: XS　　　　　*Python, Ngrok, API Creation*

Creating Endpoint URLs for Open-Source LLMs

- Engineered and released a Python package for generating Endpoint URLs for LLMs.
- Supports 99% of open-source LLMs available on Hugging Face.
- Utilizes the Ngrok API to establish a secure tunnel from the server's localhost to the global network.

• Remote Shell Access Bot: XAdmin　　　　　*Python, Telegram, Networking, Operating Systems*

Establishes Reverse Shell Connections without login credentials

- Access the host PC's shell remotely without the host's awareness.
- Transforms your Telegram chat into a command line for your PC, enabling remote administration from a distance.
- Supports 5+ features including *remote file sharing, screenshot capture, terminal access, IP address extraction,* etc.

TECHNICAL SKILLS

- **Programming Languages:**
  Python, React, JavaScript, C, C++, SQL, Matlab, R
- **AI and LLM Tools/Frameworks:**
  LangChain, LlamaIndex, Ollama, HuggingFace Transformers, PyTorch, TensorFlow
- **Data Analysis and Visualization Tools:**
  Pandas, Numpy, Seaborn, Power BI
- **Miscellaneous Skills:**
  Linux, MacOS, Competitive Programming
- **Soft Skills:**
  Leadership, Communication, Problem Solving

RELEVANT COURSEWORK

- **Core Computer Science:**
  Object Oriented Programming, Database Management System, Computer Architecture Organization, Computer Network, Operating System, Data Structures and Algorithms
- **Artificial Intelligence and Data Science:**
  Artificial Intelligence, Data Visualization, Pattern Recognition and Machine Learning, Natural Language Processing
- **Mathematics and Theoretical Foundations:**
  Theory of Computation, Cryptography and Network Security

ACHIEVEMENTS

Indian Institute of Management (Data Analyst) Hackathon Winner, 2024　　　　　*2024*

8 hour long Hackathon, organized by InFED at Nagpur on 12 November 2024

- Won 1st place by presenting a solution to the Startup's Problem: **AI Product Comparison**.
- Automated the generation of a **22-page report** using a Python-based AI Agent, significantly reducing manual effort and time by 90%.

EDUCATION

Bachelors of Technology (Hons.) CSE Data Science　　　　　*2022-Present*

(6th Semester) Chhattisgarh Swami Vivekanand Technical University, Bhilai, 491107　　　　　CGPA : 7.2/10

- Research Internship at ESIEA Paris, France (Remote) under the project "Complex Human Emotion detection with Ultralytics YOLO11".