VED PRAKASH PATHAK

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Experience

Freelance   **AI Developer & Machine Learning Engineer**   **04/2023 - Present**

- Versatile Freelance AI Developer & Machine Learning Engineer proficient in Python, specializing in Natural Language Processing (NLP), Computer Vision, and Generative AI.
- Developing expertise in developing chat-based applications and implementing cutting-edge RAG-based recommendation systems.
- Demonstrated ability to leverage advanced AI techniques to solve complex problems and deliver innovative solutions.

Projects

WEBSAGE: CHAT WITH ANY WEBSITE [**Link**]

Chatbot

- Developed a RAG-based chatbot capable of interacting with any website using OpenAI's GPT.
- Utilized Langchain for seamless integration and FAISS as the vector database for efficient retrieval.
- Engineered a system for enhanced interaction with web content, enabling comprehensive web-based conversations.

VoiceIQ: Artificial Intelligence Interviewer [**Link**]

AI INTERVIEWER

- VoiceIQ: simulates an AI interviewer for Generative AI developer positions using OpenAI API for audio transcription, AI response generation, and text-to-speech conversion.
- Features include recording audio, transcribing with OpenAI's Whisper model (achieving up to 95% accuracy), generating responses with GPT-3.5-turbo, converting text to speech with natural-sounding output, and displaying interactions in a chat-like interface.
- VoiceIQ: enhances the interview process by providing real-time feedback, improving candidate evaluation efficiency, and delivering a seamless user experience through advanced AI technologies.

IMAGE GENERATION WITH GANs [**Link**]

Image Generator

- Achieved 91% convergence in concurrent GAN training within 9 hours across 100 epochs.
- Engineered a Generator to produce realistic fashion images with a g_loss of 0.312.
- Calibrated the Discriminator for precise classification, maintaining a d_loss of 1.1025 and consistent 10% progression per epoch in Generator performance.

Skills

- **Languages:** Python, HTML & CSS, JavaScript
- **Domains:** Natural Language Processing (NLP), Generative AI
- **Frameworks/Libraries:** TensorFlow, Scikit-Learn, PyTorch, Langchain, FastAPI, Pinecone, Hugging Face Transformers
- **Cloud Platforms:** AWS, GCP, Azure
- **Containerization/Orchestration:** Docker, Kubernetes
- **Text Representation:** ngrams, TFIDF, Word2Vec, GloVe, BERT, GPT, semantic extraction
- **NLP Techniques:** NER, POS tagging, text classification, sentiment analysis, topic modeling, text summarization, spaCy

Education

Bachelor Of Engineering In Mechanical Engineering, CGPA: 7.54   **2015-19**
Rajiv Gandhi Proudyogik Vishwavidyalaya, Bhopal

Certifications [**Link**]

- **Machine Learning Systems**
- **Feature Engineering**
- **ML Pipelines on Google Cloud**
- **MLOps with Vertex AI**
- **Computer Vision Fundamentals with Google Cloud**
- **TensorFlow on Google Cloud**