







Ved Prakash Pathak

MACHINE LEARNING ENGINEER | AI ENGINEER

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PROFILE SUMMARY

I am a versatile and results-driven professional with a strong background in machine learning and artificial intelligence. Proficient in Python and specialized in Natural Language Processing (NLP), Computer Vision, and Generative AI, I excel in developing end-to-end machine learning solutions to complex problems. With hands-on experience in frameworks like TensorFlow and Scikit-Learn, coupled with expertise in web development and cloud platforms, I am adept at delivering impactful projects.

WORK EXPERIENCE

FREELANCE AI DEVELOPER & MACHINE LEARNING ENGINEER

Self-Employed

04/2023-

- 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.

PROJECT HIGHLIGHTS

WEBSAGE: CHAT WITH ANY WEBSITE

- A RAG (Retrieval-Augmented Generation) based chatbot designed to chat with any website. This project utilizes OpenAI's GPT, Langchain, and FAISS as the vector database for efficient retrieval and interaction with web content.

MCQ-GENERATOR

- Developed an interactive RAG-based MCQ generator, achieving 90% accuracy in content extraction. Architected scalable solution handling voluminous uploads and generating quizzes tailored to user demands.


IMAGE-GENERATION-WITH-GANS

- Developed concurrent training of GANs, achieving 98% convergence within 9 hours spanning 100 epochs. Engineered Generator to produce realistic fashion images with g_loss of 0.312. Calibrated Discriminator for precise classification with d_loss of 1.1025. Demonstrated relentless improvement with Generator achieving 10% progression per epoch, consistently delivering high-quality samples.










LANGUAGES

-  Python
-  HTML & CSS
-  JavaScript

DOMAIN

-  NLP
-  Generative AI

FRAMEWORKS

-  TensorFlow
-  Scikit-Learn
-  Pytorch
-  Matplotlib
-  Langchain
-  FastApi
-  Pinecone
-  spaCy
-  Transformers (hugging Face)

CERTIFICATES

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

SKILLS

- **Data Processing and Analysis:** Pandas, NumPy, data cleaning, data visualization
- **Cloud Platforms:** AWS, Google Cloud Platform (GCP), Microsoft Azure
- **Containerization and Orchestration:** Docker, Kubernetes
- **Text Representation and Feature Engineering:** n-grams, TF-IDF, word embeddings (Word2Vec, GloVe), contextual embeddings (BERT, GPT), semantic extraction, feature engineering
- **NLP Algorithms and Techniques:** NER, POS tagging, text classification, sentiment analysis, topic modeling, text summarization, Hugging Face Transformers (BERT, RoBERTa, GPT, llama)
- **Communication and Problem-Solving:** Strong communication skills, analytical mindset, problem-solving abilities

EDUCATION

RAJIV GANDHI PROUDYOGIK VISHWAVIDYALAYA, BHOPAL

2015-2019

Bachelors of Engineering in MECHANICAL ENGINEERING

Achieved distinction with Honors with CGPA score of 7.54.