Sujit Patel

Phone: +917745971630   Email: sujitpatel0202@gmail.com   GitHub: sujitpatel22   LinkedIn: sujit-patel-85078723b

PROFESSIONAL SUMMARY

- 1+ year experience in deep learning, machine learning algorithms, creating machine learning models using ensemble methods and visualizations, and working on Linux.
- 2+ years of experience creating object-oriented applications using Python, and C++ and implementing data structures and algorithms with 60% faster response.
- Certified in ML & DL from DeepLearning.AI & Harvard and proficient in TensorFlow & Keras.
- Notable works include Retrieval Augmented Generation system and Controllable generation using GANs.
- Enhancing expertise in LLMs and advanced machine learning techniques.

PROJECTS

Controllable image generation with GAN *(TensorFlow, Python, NumPy)*   July 2024
- Implemented a feedback-based noise update system with a pre-trained ResNet classifier.
- Designed the feature classifier, achieving 96% classifier accuracy, and reducing misclassification rates by 50%.
- Improved generation quality by reducing average feature overlap by 40%, creating clear untangled latent space.
- Performed data augmentation to increase the size of the dataset by 150%, resulting in a more robust dataset.

Retrieval Augmented Generation System *(Python, Pinecone DB, Google API, Django)*   May 2024
- Built a context-query search system using Google search API and vector database.
- Reduced average context search time by 30% for 2048 tokens and average result inference time by 35%.
- Maximized validation accuracy to 89%, leading to 45% reduction in false positives; Implemented vector similarity search, enhancing machine learning model with BERT fine-tuning on SQuAD.
- Increased user engagement by 25% with responsive interface using the Django backend.

Explainable AI: Grad-CAM and Scene Detection (TensorFlow, Python, NumPy)   April 2024
- Created a gradient visualization system for analyzing feature weights in an image for classification.
- Trained a ResNet model for feature extraction on Microsoft dataset with 17034 original and 17034 augmented examples in 6 classes.
- Achieved accurate feature weights with 85% clear gradient output using a custom training loop.
- Scored 94% training and 92% validation accuracy with cross-validation set.

SKILLS

- Machine learning
- Deep learning
- Neural Networks
- LLM fine-tuning
- Azure
- MySQL
- SQL
- Linux
- TensorFlow
- Keras
- Scikit-learn
- Pandas
- Matplotlib
- Django
- NumPy
- C++
- Python
- Cognitive thinking
- Communication

CERTIFICATIONS

Large Language Models (LLMs) Operations specialization   (Duke University, In progress)
Generative Adversarial networks (GANs) specialization   (DeepLearning.AI, In progress)
Python for Data Science and Machine Learning (Harvardx CS109x)   (Harvard University, July 2024)
Machine Learning with Python (MITx 6.86x)   (MIT, July 2024)
Deep Learning Specialization & Advanced TensorFlow   (DeepLearning.AI, May 2024)

EDUCATION

Bachelor of Computer Applications (BCA) - Amity University, Madhya Pradesh   June 2025
CGPA: 8.51 / 10

X, XII - ST. Joseph's School (ISC), Singrauli, Madhya Pradesh   July 2021
Percentage: 83.3%