Sujit Patel

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PROFESSIONAL SUMMARY

- 2+ years experience in developing scalable web applications with Django, and Python desktop applications, creating Machine learning models using ensemble methods, and visualizations, and working on Linux.
- 3+ years experience in creating object-oriented applications using Python and C++ & Data structures and algorithms with 60% more efficiency.
- Certified in Linux from IBM and web development with Django & SQL from Harvard University.
- Notable works include projects showcasing and sharing platform & social network site.
- Enhancing expertise in Dockers and Microservices.

PROJECTS

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.

Social networking platform *(Django, Python, SQLite3, JavaScript, HTML, CSS)*   May 2022
- Deployed a social networking site, offering multiple user sessions, account managing, post sharing & feedbacks.
- Designed efficient database architecture achieving 60% overhead reduction for multiple retrievals.
- Increased average user retention by 30% through targeted engagement strategies and personalized content.
- Improved application performance by 40% leading to 30% less overhead for multiple requests.

SKILLS

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

CERTIFICATIONS

Backend development specialization	(IBM, In progress)
Python for Data Science and Machine Learning (Harvardx CS109x)	(Harvard University, July 2024)
Deep Learning Specialization & Advanced TensorFlow	(DeepLearning.AI, May 2024)
Databases with SQL and MySQL (Harvardx CS50)	(Harvard University, Nov 2023)
Web development with Python (Harvardx CS50)	(Harvard University, June 2022)

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%