**Sujit Patel**

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**PROFESSIONAL SUMMARY**

* 2+ years experience in creating scalable web applications with Django, Python desktop applications, creating Machine learning models, visualizations and working on Linux.
* 2+ years experience in creating object-oriented applications with Python and C++ & Data structures and algorithms.
* Certified in Linux from IBM and web development with Django & SQL from Harvard University.
* Notable works include (but not limited to), projects showcase 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**

* Created context-query search system using google search API and vector database.
* Scored 89% accuracy, leading to a 45% reduction in false positives; Implemented vector similarity search, enhancing machine learning model with BERT fine-tuning on SQuAD.
* Increased user experience by 1.4x by reducing average result time to 0.4 sec for 2 048 tokens.
* Designed a responsive interface with Django for query search with download result option.

**Explainable AI: Grad-CAM and scene detection** (TensorFlow, Python, NumPy) **April 2024**

* Created a gradient visualization system for analysing 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.
* Added a custom training loop with classification layers to extract gradient channels for visualization.
* Achieved 94% training accuracy 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 user login, account managing, post sharing & feedbacks.
* multiple user login sessions allowed.
* Integrated CSRF verification for secure API routing to backend.

**SKILLS**

**Core skills:** MySQL, SQL, Linux, Azure, Machine learning, Deep learning, Neural Networks, LLM fine-tuning

**Programming languages:** C++, Python, Object oriented programming, HTML, CSS

**Frameworks/Libraries:** Django, Pandas, TensorFlow, Keras, Scikit-learn, NumPy, Matplotlib, Seaborn

**Soft skills:** Strategic Thinking, Collaboration, Cognitive Flexibility, Communication

**CERTIFICATIONS**

Statistical learning for machine learning (Illinois Tech, In progress)

Python for Data Science and Machine Learning (Harvardx CS109x) (Harvard University, July 2024)

Deep Learning specialization & Advance 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 2022 – 2025

CGPA: 8.51 / 10

X, XII - ST. Joseph’s School (ISC), Singrauli, Madhya Pradesh 2019 – 2021

Percentage: 83.3%