

Passionate Machine Learning Engineer currently working at SDSol Technologies. Skilled in Deep Learning, Computer Vision, Natural Language Processing, and Data Science, Generative-AI and Large Language Models (LLMs) with a strong commitment to research and development.

SKILLS

Programming Languages	Python, R (Basic), SQL
Generative AI	LangChain, LlamaIndex, OpenAI , HuggingFace, Gemini, Open-AI, DeepSeek
Deep Learning	Keras, TensorFlow, OpenCV, FastAI, PyTorch, Transformers, NLTK
Machine Learning	Numpy, Pandas, scikit-learn, Matplotlib, Seaborn
Tools	VS Code, Jupyter-Notebook, Google Colab, Kaggle, Microsoft Fabric
Technologies	Git, FastAPI, Gradio, Streamlit, SeekrFlow
Soft Skills	Time Management, Leadership, Communication, Team Work

TECHNICAL EXPERIENCE

Machine Learning Engineer June 2024 — Present
SDSol Technologies Lahore, Pakistan

- Developed an AI-powered code review system using **Gemini Flash API** to evaluate syntax, security, performance, and documentation, enhancing developer productivity and code quality.
- Built an AI-driven RAG chatbot using **LlamaIndex** and **Pinecone** for **SDSol's** website, enabling intelligent, context-aware query resolution.
- Developed an AI-based test case generation system, utilizing **LLMs** to automate test writing with appropriate testing frameworks (e.g., **pytest**, **JUnit**, **Mocha**), reducing manual effort and improving test automation.
- Created a real-time route optimization API for delivery logistics, integrating **Geopy**, **OpenAI SDK**, and **OSRM API** to enable dynamic, time-efficient rider allocation and interactive route visualization.
- Automated image annotation workflows by developing a **Label Studio ML backend** using **YOLOv8**, significantly improving annotation efficiency and accuracy.
- Designed and deployed **ML APIs** with **FastAPI**, integrating **YOLOv8**-based detection, image classification, and regression models for scalable AI deployment.
- Developed a predictive sports chatbot using **SeekrFlow** and a classification model using Ensemble methods analyzing **NBA NFL** historical data to provide game and player performance predictions.
- Conducted RD on AI-powered **behavior recognition** and **anomaly detection** systems for real-time surveillance applications, leveraging **CNNs**, **RNNs**, and **Transformers** on datasets like **UCF-Crime** **Kinetics-700**, achieving a 9 percent improvement in anomaly detection accuracy and reducing false positives in real-time monitoring.
- Fine-tuned **DeepSeek-V3** on a sentiment analysis task to evaluate its performance in a local environment, assessing accuracy, inference speed, and resource efficiency.

EDUCATION

Bachelor of Computer Science, COMSATS University September 2020 — July 2024
Talent Hunt Merit Scholarship, COMSATS University CGPA: 3.35
Relevant Courses: Machine Learning, Artificial Intelligence, Data Science, Computer Vision, Bioinformatics

CERTIFICATIONS

- Machine Learning Specialization**, Stanford Online October 2023
- AI for Everyone**, Stanford Online August 2023
- Neural Networks and Deep Learning**, Stanford Online April 2024
- Generative AI with LLMs**, Stanford Online July 2024

REFERENCES

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