

Gaurav Sharma

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About Me

Experienced AI professional with a Master's degree in Data Science, bringing a robust foundation in statistics and expertise in Python programming, machine learning, and deep learning. Highly proficient in generative AI, Large Language Models (LLMs), transformer architectures, and computer vision applications. Adept at translating complex data insights into actionable business strategies that drive innovation, improve customer experiences, and optimize performance. Known for a meticulous, proactive approach to problem-solving, and a proven track record of delivering high-impact solutions both independently and within collaborative teams.

Technical Skills

- Operating Systems: Windows, Linux, iOS
- Programming Language: Python
- Data Analysis: Excel, NumPy, Pandas, Pillow
- Data Visualization: PowerBI, Matplotlib
- Predictive Modeling: Machine Learning, Deep Learning
- Image Processing: Computer Vision (OpenCV), Neural Networks, CNN
- Generative AI: Large Language Models (LLM)- LLAMA, Open AI(Whisper),Retrieval-Augmented Generation (RAG)
- Natural Language Processing (NLP): NLTK, Sentiment Analysis, Transformers, Name Entity Recognition(NER)
- Frameworks & Libraries: Scikit-learn, TensorFlow, Keras, Flask, PyTorch, Huggingface ,Langchain
- IDEs & Tools: Jupyter Notebook, Google Colab, Visual Studio Code, GitHub
- Conversational AI: RAG, Ollama,Chatbot Development
- Deployment: Google Cloud Platform(GCP)
- Object Detection Techniques: YOLO
- Proficient in Secure Shell (SSH)
- Annotation Tools: Labellmg
- Parallel Computing: CUDA

PROFESSIONAL EXPERIENCE

SourceDOTcom Pvt Ltd Oct 2023 - Present
Data Scientist

- WhisperTranscriber Advanced speech-to-text application for accurate audio transcription. Utilizes Flask framework and faster_whisper library to convert audio formats (mp3, wav, mp4) to text.
- Designed and implemented a conversational intelligence pipeline to process and analyze medical prescriptions from images using OCR, NLP, and deep learning. Integrated Hugging Face and LLAMA3 models to automate extraction and organization of medical data, optimizing workflows. Built an API for a government mobile app.
- Designed a conversational chatbot using LangChain, Hugging Face Embeddings, Retrieval-Augmented Generation (RAG), and the Ollama LLAMA3 model. Built an API for this chatbot, which has been implemented in a mobile app for a government medical application.
- Deployed an Automatic Traffic Management System featuring vehicle detection, wrong lane detection, triple riding detection, and helmet detection. Implemented using Flask, YOLOv5 and converted models to TensorRT for high inference efficiency. The system is deployed on a Jetson Nano device with CUDA compatibility.

Glamyo Health Technologies Dec 2022 - Oct 2023
Data Scientist

- Developed a predictive model to forecast surgery prices for non-invasive procedures using customer data from the previous year. Utilized machine learning techniques for accurate pricing predictions and trend analysis. The project involved data pre-processing, feature engineering, and model training using Python, Pandas, and Scikit-learn.
- Designed and implemented interactive dashboards to visualize key metrics using Power BI and Excel. The dashboards provided insights into business performance and operational efficiency, aiding in data-driven decision-making. The project utilized Power BI, Excel's pivot tables, and advanced charting techniques.
- Collaborated with stakeholders to analyze company revenue and assess marketing campaign performance. Worked closely with the marketing team to identify which ad campaigns generated the best leads. Concluded on optimal budget allocation for ads using data-driven insights. Tools used included Excel for financial analysis and Power BI for data visualization.

CAPSTONE PROJECT

INTERNATIONAL CONFERENCE OF SCIENCE AND TECHNOLOGY VIT VELLORE

• Diabetic Retinopathy Detection through Deep Learning

In this research, I developed a deep learning model to detect and classify the severity of diabetic retinopathy using a dataset of approximately 5,000 retinal images. The model identifies whether a person is affected by diabetic retinopathy and assesses the stage of the disease, providing critical insights into the seriousness of the condition. The work contributes to early detection and improved management of diabetic retinopathy, aiding in timely medical intervention. This research was presented and published at the International Conference of Science and Technology, VIT Vellore.

• Parkinson's Disease Detection

In this project, I developed a machine learning model to detect Parkinson's Disease (PD) using both drawing patterns and voice datasets. By leveraging the Inception V3 model, I built a robust classification system capable of analyzing fine motor skills in drawings and vocal features, which are indicative of PD. The model accurately predicts whether an individual is affected by Parkinson's Disease, providing a potential tool for early diagnosis and monitoring of the condition.

EDUCATION

M.sc Data Science

VIT, Vellore 2021-2023

B.sc Mathematics Hons.

Sharda University, Gr. Noida 2018-2021

CERTIFICATIONS

- Data Science - Python, Machine Learning, and Deep Learning
- Microsoft Power BI - Data Visualisation, Dashboard, and Data Insights
- Generative AI via Google - LLM, Transformers, Encoder-Decoder Architecture, Attention Mechanism, and BERT Model
- OCI Generative AI Certified Professional via Oracle University