

Praveen Vishwakarma

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Profile Summary

Data Scientist with 3 years of academic and 1.5 years of professional experience, proficient in Python, SQL, and data visualization tools including Tableau and Snowflake. Demonstrated success in developing scalable analytics solutions that drive actionable insights and optimize cost strategies. Skilled in automating data pipelines and delivering predictive models to enhance business outcomes.

Education

IIT Hyderabad

M.Tech., Computer Science and Engineering

Aug 2021 - Jun 2023

Government Engineering College, Jabalpur

B.E., Information Technology

Aug 2016 - Jun 2020

Work Experience

Axtria

Data Scientist

Aug 2023 - Dec 2024

Bangalore

- Developed a drug adherence prediction model using LightGBM, SHAP, and prescription history to reduce patient churn by 18%, aligning analytics with business objectives and facilitating actionable insights.
- Automated data validation workflows with Python scripts integrated into CI/CD pipelines, optimizing data assessment processes and ensuring reliable analytics outputs.
- Mitigated fraudulent transactions by 19% by deploying autoencoders alongside classification techniques such as XGBoost, demonstrating strong quantitative research and problem-solving skills.
- Enhanced conversion rates by 20% through implementing K-means clustering with Python and Azure to drive personalized marketing campaigns and support data-driven decision-making.
- Reduced healthcare costs by 11% by building a predictive model with XGBoost and SQL on AWS, effectively managing database performance and optimizing resource allocation.
- Streamlined SQL query generation by creating a plaintext to SQL converter using Streamlit, Llama, and Langchain, thereby reducing manual complexities and supporting rapid prototyping.

Projects

Low light image enhancement

- Crafted a 30 times faster model for developing poorly lit images using a novel technique called zeroDCE (zero reference Deep Curve Estimation).

DeepFake Detection using GAN

- Conceived a fake image detector by training two neural networks, one generated fake images and the other classifies it as fake or genuine.

Dynamic Thermal Management

- Introduced and implemented an algorithm to achieve 42% cool down in stacked chip processors.

Cluster resource optimization tool

- Designed a 25% more efficient AI-driven cluster optimization tool for distributed environments using K8s, tensorflow.

Banking Document Analysis

- Streamlined banking document analysis by 37% by fine-tuning LLMs for automatic summarization, clause extraction, and risk analysis of loan and policy documents. Tools used were spacy, langchain, hugging face.

Text sentiment analyser

- Improved customer feedback classification accuracy by 44% by analysing banking reviews. The tools used were BERT, tensorflow, NLTK.

Skills

- **Languages:** C/C++, Java, Python, R, spark, SQL, HTML/CSS
- **Frameworks:** Flask, FastAPI, tensorflow, pytorch, keras, snowflake, big data analytics, sklearn, opencv, text-to-speech, GPT
- **ML/AI:** Neural Networks, Machine Learning, LLM, LSTM, GAN, NLP, Image Processing, Audio & Text Processing, Encoder - Decoder, redshift, amazon S3, digitalocean
- **Other Tools:** git, AWS, azure, Kubernetes, docker, openAI, Librosa, Kaldi, streamlit, spacy, transformers, hugging face

Certifications

- Neural Networks and Convolutional Neural Networks essential training
- Prompt engineering for Generative AI