Vimal Kumar

+91-7905693457 vk2699945@gmail.com https://www.linkedin.com/in/vimal-k-952745203/

Education

Rajkiya Engineering College **Nov 2020 - Jun 2024**
B.tech(CSE) *india*
- **GPA:** 7.3

Projects

Next-Word-Prediction-With-LSTM **Jan 2025 - Feb 2025**
- Developed a Next-Word Prediction model using LSTM, achieving an accuracy of 92% in predicting the next word based on previous context.
- Trained the model on a dataset of over 1 million text samples, improving its language understanding through embedding layers and dropout regularization.
- Optimized model performance by tuning hyperparameters, reducing training time by 30% and achieving real-time prediction speeds under 100ms.

Duplicate_Question_Pairs **Nov 2024 - Dec 2024**
- Built a duplicate question detection model using Siamese Neural Networks, achieving an F1-score of 0.87 on the Quora Question Pairs dataset.
- Processed over 400,000 question pairs, incorporating word embeddings like GloVe to enhance text similarity analysis.
- Optimized the model with hyperparameter tuning, reducing classification error by 15% and achieving inference speeds under 200ms per pair.

Create-Conversational-Q&A-Chatbot-using-Gemini-Pro **Sep 2024 - Oct 2024**
- Developed a conversational Q&A chatbot using Gemini Pro, achieving an 85% accuracy in answering user queries across 50+ topics.
- Integrated advanced NLP capabilities of Gemini Pro to enhance context retention, reducing response errors by 20%.
- Deployed the chatbot on a scalable cloud platform, handling over 1,000 queries per hour with a response time of less than 300ms.

Building-A-chatbot-application-using-NLP **Jul 2024 - Aug 2024**
- Developed a chatbot application leveraging Natural Language Processing (NLP) techniques to classify user intents and generate context-aware responses.
- Integrated pre-trained models like BERT/GPT to enhance language comprehension and improve conversational accuracy.
- Built a user-friendly interface using Flask/Django for seamless user interaction and engagement.

Traffic Sign Classification **May 2024 - Jun 2024**
- Developed a Convolutional Neural Network (CNN) achieving 95% accuracy in classifying 43 categories of traffic signs from the German Traffic Sign Recognition Benchmark (GTSRB) dataset.
- Performed data preprocessing and augmentation, increasing dataset size by 20% to improve model generalization and performance.
- Deployed the model using Flask/Django, enabling real-time classification with a latency of less than 200ms per prediction.

House Prices: Advanced Regression Techniques **Mar 2024 - Apr 2024**
- Built a regression model using XGBoost and Random Forest, achieving a R2 score of 0.89 on the Kaggle House Prices dataset.
- Engineered 30+ features, including handling missing values and creating polynomial features, to improve model performance.
- Optimized hyperparameters using GridSearchCV, reducing the Mean Absolute Error (MAE) by 15%, and ranked in the top 10% on the Kaggle leaderboard

Bank Customer Chum Prediction Using H2O Auto ML **Jan 2024 - Feb 2024**
- Developed a customer churn prediction model using H2O AutoML, achieving an AUC of 0.92 and an accuracy of 88%.
- Processed and analyzed a dataset of over 10,000 customer records, addressing missing values and feature scaling for improved model input.
- Optimized model performance by leveraging H2O's ensemble methods, reducing false-positive rates by 12%.

Skills

- Python, Jupyter Notebook, SQL, Machine Learning, Deep Learning, Feature Selection, Feature Engineering, NLP, Data Science, AWS, MapReduce, scikit-learn, Flask, Docker, XGBoost, BERT, Pyspark, Generative AI, Google Gemini, Evalml, Large Language Models (LLM), Langchain, MLOps

Certificates

- **Python Developer Associate**: Python Developer Associate PDAC-24
- **Machine Learning**: Machine Learning- From Basics to Advanced
- **Data Science Master Class**: Master class on Data Science using Python A-Z for ML
- **ML TensorFlow**: ML TensorFlow on Google Cloud