VOONA SRIRAJ

 Github | in Linkedin | ✉ srirajvoona2004@gmail.com | 📱 +91 637041597

Education

SRM University AP   **December 2022 - Present**
Bachelor of Technology in Computer Science and Engineering   CGPA: 8.4

Gandhi Public School   **2020 - 2022**
Intermediate CBSE   Gunupur, Odisha

Technical Skills

- **Programming Languages:** C++, Python, SQL, Java, HTML, CSS
- **Data Analysis & Visualization:** Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn, SQL, Excel, Power BI, Tableau
- **Machine Learning & Deep Learning:** Regression, Classification, XGBoost, Random Forest, ANN, CNN, RNN, Transformers; end-to-end model building and evaluation.
- **Generative AI & NLP:** LangChain, OpenAI API, Hugging Face, FAISS, Retrieval-Augmented Generation (RAG), AI Agent Design, Text Preprocessing, Tokenization, Prompt Engineering
- **MLOps & Deployment:** Streamlit, Flask, GitHub Actions, Docker
- **Cloud Platforms:** AWS (S3, EC2 basics)
- **Databases:** MySQL, MongoDB

Professional Experience

Machine Learning Research Intern   **August 2024 - December 2024**
SRM University AP   Guntur, Andhra Pradesh

- Performed sentiment analysis on Twitter dataset analyzing public sentiment toward COVID-19 vaccinations using Python and machine learning algorithms, achieving high accuracy in sentiment classification
- Implemented comprehensive data preprocessing pipeline including text cleaning, tokenization, and feature extraction for social media data analysis
- Developed Logistic Regression model with cross-validation and performance optimization, creating actionable insights for public health communication strategies

Technical Projects

WebAssist RAG-Powered AI Web Assistant | *Streamlit, LangChain, FAISS, HuggingFace, LLaMA*

- Built Streamlit-based chatbot leveraging LangChain, FAISS vector database, and HuggingFace embeddings for semantic search over C++ documentation with context-aware responses
- Integrated ChatGroq LLaMA-3 model using Retrieval-Augmented Generation architecture delivering real-time LLM querying with source document visibility
- Engineered end-to-end ML pipeline including document loading, text chunking, vector storage, and semantic search capabilities for enhanced question-answering performance

Handwritten Character Recognition using Convolutional Neural Network | *Python, TensorFlow, Keras, OpenCV*

- Developed CNN model for handwritten character recognition achieving high accuracy on 26 alphabet categories using grayscale 28x28 pixel images with optimized neural network architecture
- Implemented comprehensive data preprocessing pipeline including image reshaping, normalization, and one-hot encoding for optimal model performance
- Applied computer vision techniques and deep learning algorithms using Adam optimizer, categorical crossentropy loss, and ReLU activation for robust pattern recognition

AI Voice Assistant with Natural Language Processing | *Flask, Google Generative AI, JavaScript, HTML, CSS*

- Built Flask-based AI voice assistant integrating Web Speech API for voice input processing and Google Gemini 1.5 Pro for intelligent response generation with real-time conversation tracking
- Developed responsive web interface with seamless voice-to-text conversion and text-to-speech synthesis enabling interactive AI communication
- Integrated Google Generative AI APIs for advanced natural language processing and conversational AI functionality with natural language understanding capabilities

Certifications and Training

- **Machine Learning and Deep Learning** - IBM SkillBuild
- **Natural Language Processing and Computer Vision** - IBM SkillBuild
- **A Joy of Learning Python** - NPTEL