Sontamu Rohit Kumar Reddy

LinkedIn : https://www.linkedin.com/in/rohitsontamu/ Email: sontamurohitkumarreddy@gmail.com
GitHub : https://github.com/Rohitsontamu Mobile: + 91-9515200938

Skills

- **Languages**: Python, Java
- **Tools/Platforms**: MySQL, VS Code, Excel, Tableau, Machine Learning, Exploratory Data Analysis (EDA)
- **Soft Skills**: Team player, Adaptability, Time Management

Training

- **GeeksforGeeks** Jun '24 – Jul '24

- Data Science and Machine Learning
  - Strengthened problem-solving skills through hands-on coding challenges and algorithmic problem-solving.
  - Learned key Machine Learning techniques such as regression, classification, clustering, and model evaluation metrics.
  - Worked on real-world datasets, built and fine-tuned ML models, and applied them to derive meaningful insights.
  - Explored deep learning fundamentals and neural networks for advanced ML applications.

Projects

- **Birdcall Recognizer** | *Python, Pandas, Librosa, scikit-learn, TensorFlow* Feb '25 – Apr '25
  - Developed a scalable bird call classification system capable of identifying Indian bird species from vocalizations using supervised learning techniques.
  - Pre-processed over 10,000+ audio samples from the eBird and Xeno-Canto India datasets, handling data cleaning, segmentation, and augmentation.
  - Engineered high-quality input features by extracting MFCCs from 3-second audio segments, enabling robust audio-to-vector transformations.
  - Leveraged TensorFlow, Librosa, and torchaudio for real-time spectrogram generation and GPU-accelerated training pipelines.
  - Achieved 80%+ species classification accuracy across validation sets, demonstrating practical viability for bioacoustics monitoring.

- **Image Quality Assessment** | *Python, NumPy, Pandas, scikit-learn, OpenCV* Jan '25 – Mar '25
  - Processed 10,073 images from the KonIQ-10k dataset with MOS, ACR, and metadata.
  - Extracted 4 key quality features (brightness, contrast, sharpness, colourfulness) + 512-dimensional CNN deep features, totalling ~520 features per image.
  - Achieved Mean Absolute Error (MAE): 0.3442 and Validation Loss: 0.2038 with a custom CNN model.
  - Improved R^2 score from 0.62 to 0.86 after hyperparameter tuning.
  - Enabled real-time MOS prediction via API using Docker Compose and Jenkins for CI/CD deployment.

- **Crime Data Analysis** | Python, NumPy, Pandas, Matplotlib, Seaborn Dec '23 – Jan '24
  - Conducted Exploratory Data Analysis (EDA) on the Crimes in India dataset to identify crime patterns and trends.
  - Examined crime distribution across states, years, and different crime categories.
  - Uncovered insights into crime rates, demographic influences, and regional variations.
  - Visualized findings using heatmaps, bar charts, and time-series plots for better interpretation.
  - Analyzed correlations between socioeconomic factors and crime rates to derive meaningful conclusions.

Certificates

- Machine Learning Foundations by Washington University. Feb '25
- Data Science and Machine learning by GeeksforGeeks Aug '24
- Python for Data Science by Coursera Jan '23

Achievements

- Secured 2nd place at XebiaFest at University
- Solved 140+ problems on LeetCode.

Education

- **Lovely Professional University** Punjab, India
  Bachelor of Technology - Computer Science and Engineering; ***CGPA: 7.29*** *2022 - present*
- **Narayana Junior College** Hyderabad, Telangana
  Intermediate; ***Percentage: 96%*** *2020 - 2022*
- **Bhashyam High School** Guntur, Andhra Pradesh
  Matriculation; ***Percentage: 100%*** *2019 -2020*