Akula Hema Venkata Sriram

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Portfolio: Sriram Akula | Portfolio

Skills

- **Languages**: C++, C, Java, Python, HTML, CSS
- **Technologies**: NumPy, Pandas, Matplotlib, Seaborn, scikit-learn, TensorFlow, CNN
- **Developer Tools**: VS Code, Git, GitHub, Google Colab
- **Soft Skills**: Critical Thinking, Collaborative Mindset, Adaptive Learner, Optimism

Internship

- **Academor (online)** Sep 2024 – Oct 2024
  Machine Learning Intern
  - Designed and implemented a machine learning model to classify Breast cancer instances as malignant or benign based on various features such as tumor size, texture, and smoothness.
  - Evaluated model performance for breast cancer detection, achieving an accuracy of 97.66% with Logistic Regression and 97.08% with Random Forest, demonstrating high reliability.
  - Enhanced breast cancer detection (up to 98% accuracy) by identifying high-risk cases with tailored predictive modelling, improving early diagnosis and patient outcomes.
  - **Tech stack used:** Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn.

Projects

- **Human Activity Recognition using CNN | Machine Learning** Mar 2025 - Apr 2025
  - Used transfer learning approach for multi-class image classification using Convolutional Neural Networks (CNNs).
  - Achieved 91% test accuracy in multi-class activity prediction using a pre-trained ResNet50 model.
  - Processed 1,000+ testing images with data augmentation techniques (rotation, zoom, shift) to improve model accuracy, enhanced overall performance by 6%.
  - **Tech**: scikit-learn, NumPy, Pandas, CNN, Matplotlib, TensorFlow, Keras, ResNet50.
- **Part-of-Speech Tagging and Spellchecking in Telugu | Natural Language Processing** Sep 2024 - Nov 2024
  - Developed an NLP model integrating BiLSTM for POS tagging and probabilistic spellchecking, achieving 75.8% accuracy, outperforming the standalone BiLSTM model 71.7%.
  - Boosted the F1-score to 0.74, outperforming the CRF model's F1-score of 0.67, significantly enhancing precision, recall, and overall sequence labeling accuracy, driving more effective and reliable POS tagging results.
  - Enhanced text processing in chatbots, search engines, and translation systems, improving accuracy by 5%.
  - **Tech**: stanza, Python Libraries, BILSTM, CRF.
- **Customer Churn Prediction | Machine Learning** Feb 2024 - Mar 2024
  - Built a predictive system for customer churn in the telecom sector, analyzing and comparing five classification algorithms.
  - Applied SMOTE-ENN to handle data imbalance, with Random Forest achieving the highest performance (95% accuracy).
  - Performed feature analysis and model evaluation to enhance predictive accuracy (up to 95%) and business insights.
  - **Tech**: Python, Pandas, scikit-learn, Imbalanced-learn, Seaborn, Matplotlib.

Certificates

- Cloud Computing (NPTEL) Nov 2024
- Complete Interview Preparation - Self-Paced (C++) by GFG Jul 2024
- Generative AI with Large Language Models (Coursera) Apr 2024

Achievements

- **Research Publication:** Feb 2025
  - Published a Natural language processing research paper in Grenze International Journal of Engineering and Technology (GIJET).
  - Research paper on "Image Classification using CNN" accepted in the Hinweis International Conference on Image Processing, Conference Proceedings, indexed by Scopus and Crossref.
- **Second place in Build-A-Thon:**
  - Generated a machine learning model to calculate calorie expenditure. Apr 2024
  - Improved the model performance by using XGBoost.

Education

- **Lovely Professional University** Punjab, India
  Bachelor of Technology - Computer Science and Engineering **CGPA: 8.9** Aug 2022 - Present
- **Sasi New Gen. Junior College** West Godavari, Andhra Pradesh
  Intermediate **Percentage: 97.1%** Jun 2020 - May 2022