Asish Karthikeya Gogineni

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EDUCATION

Master of Science in Computer Science *Aug 2024 -- Present*
Georgia State University
Related coursework: Machine Learning (ML), Digital Image Processing, Data Security, Database Systems
B. Tech in Computer Science & Engineering *Sep 2020 -- July2024*
SRM University **(Research Gold medal)** **GPA: 9.06/10**

PROFESSIONAL EXPERIENCE

Georgia State University *Aug 2024 - Present | Atlanta, GA, USA*
Graduate Research Assistant

- Designed, fine-tuned, and optimized machine learning models (SVM, Random Forest, LSTM) for customer churn prediction, achieving an **8%** increase in accuracy.
- Applied advanced techniques, including transfer learning and hyperparameter tuning, to enhance model performance and efficiency in fraud detection, boosting accuracy by **19%.**
- Integrated LLMs for natural language processing (NLP) applications, improving data insights in customer feedback analysis and deploying fine-tuned models in real-world environments.

Deakin University *Nov 2023 - Feb 2024 | Australia- Remote*
Virtual Data Science Intern

- Implemented YOLOV5 for real-time image detection with Accuracy of **88%** using Azure Databricks, enhancing data processing
- Utilized Azure ML for model training and deployment, ensuring seamless integration with data pipelines.
- Developed and deployed *SVM models* in production to classify customer email threats using a range of Natural Language Processing (NLP) techniques, reducing false positives by **15%**.

SRM University AP *Aug 2022 - Oct 2023 | AndraPradesh, India*
Research Intern – ML & Deep Learning

- Conducted sentiment analysis using LSTM, CNN, and Transformers, deployed models with Azure ML and DevOps.
- Conducted LLM-based sentiment analysis using transformers, fine-tuning models like BERT and GPT for nuanced text classification.
- Designed MLOps pipelines, enhancing model reliability and deployment workflows.
- Created robust data models in PostgreSQL and MongoDB, ensuring data integrity for AI-driven analysis applications.

PROJECTS

Enhancing Colon Cancer Diagnosis Through Transfer Learning on Histopathology Images| *Published in Q2 Journal*

- Applied transfer learning to enhance the classification of colon cancer histopathology images. The work focused on using pre-trained models like VGGNet, ResNet, and Inception to extract features from the images, which were then categorized using machine learning techniques. This research provided valuable insights into the effective use of deep learning models for improving the accuracy of cancer diagnosis through image classification. Additionally, Deployed a PowerBI- integrated web dashboard for real-time predictions.

Comparative Study on Sentiment Analysis Using Machine Learning Techniques| *Published in Q1 Journal*

- I analyzed the rapid growth of digital data, particularly user-generated text, such as product and event reviews, across the internet. By applying Natural Language Processing tools (NLP), I classified unstructured text into positive, or negative, sentiments. and implemented various machine learning models like Naive Bayes, XgBoost, and LR to enhance sentiment classification accuracy. Among these, XgBoost demonstrated superior performance, achieving an F1 score of 83%.

A Hybrid Deep Learning Framework for Efficient Sentiment Analysis| *Published in Q3 Journal*

- Developed a hybrid deep learning framework using LSTM, GRU, CNN, and their combinations for sentiment analysis. Integrated BOW and TF-IDF to enhance accuracy. Published in the International Journal of Advanced Computer Science and Applications (IJACSA).

TECHNICAL SKILLS

Programming Languages: Python, R, SQL, C++
Machine Learning: PyTorch, TensorFlow, Keras, Scikit-learn, Tableau, NLTK, CV, NLP, LLM's, Image Processing
Big data and Cloud Tools: Apache Spark, ETL, Databricks, AWS, Hadoop
Visualization: Plotly, Seaborn, ggplot2, PowerBI
Software & Other Tools: Git, Linux, MS PowerPoint, MS Excel, MLOps, MLflow

ACHIVEMENTS&CERTIFICATIONS

Awards: First Runner-Up in ML Hackathon, Gold Medal on Research Day (5th Edition) at SRM AP, Special Mention on Research Days (7th \& 8th Edition) at SRM AP.
Certifications: Machine Learning With Big Data– UC SanDiego, Artificial Intelligence and Machine Learning, Big Data Modeling and Management Systems -- UC SanDiego.