

SAI CHARAN REDDY JILLELLA

saicharanrddy.j@gmail.com | [Sai Charan Reddy](#) | [LinkedIn](#) | 6823062317 | Arlington, Tx

[sai-charan-10 \(Sai Charan reddy\) \(github.com\)](#)

EDUCATION:

The University of Texas at Arlington, Texas

Graduation: May 2024

Master of Science: Computer Science

Coursework: Data Mining, Web Data Management, Cloud Computing, Software Engineering, Python, Data Analysis and Modelling Techniques, Data Structures and Algorithms, Machine Learning, Artificial Intelligence, Computer Networks, Database Systems.

Visvesvaraya National Institute of Technology, Nagpur, India.

Graduation: May 2022

Bachelor of Technology: Electronics and Communication Engineering

Coursework: Object Oriented Programming, C, Image analysis and Computer vision, Computer Architecture and Organization.

TECHNICAL SKILLS:

Programming Languages: Java, Python, C, C++, JavaScript, SQL.

Full Stack Development: React JS, HTML, CSS, and PHP.

Libraries/Framework: OpenCV, PyTorch, Pandas, Scikit-Learn, TensorFlow, Scrapy, Requests-HTML, spaCy, Gensim, Transformers, Pattern, GloVe, AWS.

Developer Tools: Git, GitHub, PyCharm, Visual Studio, AWS

Other: Cloud Computing, Machine Learning, Distributed Systems

PROJECTS:

STUDENT BEHAVIOR ANALYSIS USING ML

- A decision tree classifier determines if a student will attend college on a particular day or not based on various parameters.
- The F1 score for all the classes of the classifier is in the range of 0.8 to 0.9.

SENTIMENT ANALYSIS ON RESTAURANT REVIEWS – NLP

- Developed and benchmarked multiple NLP models, including GRU, LSTM, and DistilBERT, for sentiment analysis on restaurant reviews.
- DistilBERT outperformed others, achieving a 93% accuracy rate and a 97.5% ROC-AUC score, evidencing its robustness against overfitting compared to GRU and LSTM models.
- Optimized DistilBERT using TensorFlow and Hugging face's Transformers libraries, with strategies such as incorporating custom dropout layers, EarlyStopping and learning rate reduction to fine-tune performance.

Real time Automatic Polyp Detection in White light Endoscopy videos

- Trained a machine learning model for the detection and tracking of polyps in white light endoscopy videos. This model helps doctors while diagnosis by reducing chance of missing a polyp by 30-40%.
- Used extensive data preparation and augmentation techniques to create a highly accurate dataset of 2289 images which resulted in an accuracy of 90% for YOLO.
- Used YOLO for precise polyp detection in endoscopy video frames and integrated DeepSORT for robust polyp tracking, resulting in impressive MOTA (Multiple Object Tracking Accuracy) of 0.53 and 0.65 and MOTP (Multiple Object Tracking Precision) of 0.71 and 0.73 for video1 and video2, respectively.

ACHIEVEMENTS:

Participated in the 1st International Conference on Paradigm Shifts in Communication, Embedded Systems, Machine Learning, and Signal Processing (PCEMS) in Nagpur, India, 2022.

- Co-authored and published a paper titled "Real-time Automatic Polyp Detection in White light Endoscopy videos using a combination of YOLO and DeepSORT" in the conference proceedings.
- Conducted extensive research and experimentation, collaborating with a team of researchers and professionals.