

Zayed Syed Haque

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EDUCATION

- SRM Institute of Science and Technology** Chennai, India
Bachelor of Technology - Computer Science and Engineering with specialization in Data Science 2021 - Present
GPA: 9.5
Courses: Foundations of Data Science, Data Structures And Algorithms, Operating Systems, Big Data Tools and Techniques

TECHNICAL SKILLS

- Languages:** Python, R, C/C++, JavaScript
- ML Frameworks:** Scikit-learn, TensorFlow, Keras, OpenCV, SciPy, Pytorch
- Tools:** SQL, Jetson, Hadoop, git, Django, Flask, Apache Spark
- Databases:** MySQL, PostgreSQL, MongoDB, SQLite
- Visualization Tools:** MS Excel, PowerBI, Tableau

EXPERIENCE

- Student Copter Research Organization**
Computer Vision Junior Developer — Tensorflow, YOLOv3, OpenCV, Darknet May 2022 - February 2023
Finetuned YOLOv3, a deep learning model for real-time target detection in unmanned aerial vehicles (UAVs) achieving high precision by 87%.
Optimized the network structure, feature extraction and multiscale prediction of YOLOv3 by using Darknet53 to enhance its performance and accuracy by 2% for small target detection for payload delivery.
Applied image segmentation techniques to divide UAV remote sensing images into regions or pixels that have similar characteristics or features using a light-weight semantic segmentation network and deployed on ArduPilot.
- Data Science Community SRM**
Projects Director — TensorFlow, Flask, MIDI, Reactjs November 2022 - Present
Developed a Rhythm Generator, that generates random musical rhythm based on instruments and mood using ComMu dataset, a collection of over 10,000 MIDI files of various genres and styles.
Optimized the architecture of the TransformerXL model by incorporating specialized attention mechanisms and recurrence mechanisms, enabling it to capture intricate temporal dependencies and produce highly coherent rhythm sequences.
Deployed by utilizing Flask API with Reactjs and evaluated on various inputs and outputs, achieving high quality and diversity of rhythms with an average score of 4.5 out of 5 from human listeners.

PROJECTS

- Design of Line of Sight(LOS) for Communication Channels between Swarms(IoT):** Integrated doppler effect through communication channel by calculating distance between 2 UAVs (utilized antenna gain) (C++, ArduPilot) (Ongoing)
- Cycle GAN Data Augmentation(Computer Vision):** Developed in collaboration with the Tamil Nadu Farmers Welfare Department to improve lemon leaf imagery. This entailed building a CycleGAN and configuring generators and discriminators for domain-to-domain picture translation. The project greatly enhanced accuracy with a smaller dataset by significantly enriching training data.(TensorFlow)(Completed)
- Realtime Sentiment Analysis using Spark (Sentiment Analysis):** A Spark Streaming study tested realtime sentiment analysis on a streaming dataset of tweets, assessing classification and clustering models, and improving accuracy through data cleaning and preprocessing. Performance trends were visualized with an accuracy of 74 % (Apache Spark) (Completed)

HONORS AND AWARDS

- Participated in Kharagpur Data Science Hackathon 2022 - December 2022
- Participated in Aaruush'22 Nasa Space App Challenge - October 2022
- Received Certificate of Competency for Jetson AI Specialist by NVIDIA DLI - September 2022
- Participated in EnCode: Code to Innovate by IITG - January 2022
- Runner Up in Aarush'21 Nasa Space Apps Challenge - October 2021

LICENSES AND CERTIFICATIONS

- Completion of Getting Started with AI on Jetson Nano Course by NVIDIA DLI - December 2022
- The Structured Query Language by University of Colorado Boulder - September 2022
- Completion of Machine Learning Course by MIT Coursera - May 2022
- Assessment of Python by HackerRank - October 2021

VOLUNTEER EXPERIENCE

- Aaruush '22 - Creatives CM** Chennai, India
Handled the coverage of 20+ events that were held during fest April 2022 - Present
- Directorate of Alumni Affairs - Member** Chennai, India
Maintaining database and helped in increasing the alumni interaction through workshops October 2022 - Present