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: 9.4
  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,Hadoop, git, Django, Flask
- **Databases:** MySQL, PostgreSQL, MongoDB, SQLite
- **Visualization Tools:** MS Excel, PowerBI, Tableau

WORK 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)
- **Segmentation of Health Care Practitioners (HCPs) into preferred channels(Customer Segmentation)**: Developed an RFECV object with various models and 5-fold cross-validation to get the ranking of features to obtain preferred channels for each HCP with an accuracy of 45% (TensorFlow)(Completed)
- **Classification Model using 200 Birds Species Image Dataset(CNN and Transfer Learning)**: Utilized CNN and Transfer Learning to get an accuracy of 84% and minimum loss conducting to a precise prediction of different bird species image (Pytorch)(Completed)
- **Fake News Predictor of Russian-Ukraine War using Twitter Data (Sentiment Analysis)**: Created a political dataset, implemented a TF-IDF Vectorizer, initialized a PassiveAggressiveClassifier, and fit our model and obtaining an accuracy of 72.82 % (Scikit, TensorFlow) (Work in Progress)

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*