JESSE MUSA

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EDUCATION

The University of Texas at Dallas - Richardson, TX
Major: Computer Science Bachelor of Science | Minor: Statistics | Expected Graduation: December 2024
Computer Science GPA: 3.8 | Cumulative GPA: 3.65 | Jonsson Academic Success Scholarship Recipient

EXPERIENCE

Nova, Open-Source Self Driving Car *September 2022 – Current*

Core Developer

- Contributing to Nova's mission is to make an open-source self-driving car to increase accessibility of self-driving
- Developing using the Robot Operating System (ROS) to combine the C++ and python programming languages
- Applying Ground Segmentation using the Markov Random Field algorithm on a set of 3D points from 16-ring lidar
- Creating the Dynamic Occupancy Grid Maps (DOGMa) using lidar points and dynamic state information
- Implementing PredNet, a Recurrent Neural Network, to predict DOGMa across the car's future time horizon

Artificial Intelligence Society *September 2022 – Current*

Project Lead

- Leading a team to make a Resume Grader and Job Recommender using NLP techniques and AWS services
- Predicting Top Job Classes for inputted resumes using Supervised Classification Machine Learning Models
- Recommending jobs based on the Cosine Similarity Score of the vectorization of the job description and resume content
- Creating an Interactive React Front End to receive user's resumes, display resume scores and job recommendations

Association of Computing Machinery UTD September – November 2021

Research Assistant

- Researched to examine the effect of modern-day mob mentality on a companies' financial performance in the stocks market
- Web scraper 100,000+ #Neftlix Tweets from 09/2018 - 09/2021 then cleaned and applied sentiment analysis using Vader
- Calculated the correlation between the sentiments of our tweets and the stock prices to give a correlation of 0.75.

PROJECTS

Emo7ion | Convolutional Neural Network, TensorFlow Keras, Flask, Matplotlib, AWS

- Collaborated with the Artificial Intelligence Society to make a *real time* emotion detector website using AWS services
- Implemented AWS cloud services to create a deep learning Convolutional Neural Network (CNN) using TensorFlow Keres
- Trained model on 35,000+ images classified into 7 different emotions to achieve an emotion prediction accuracy of 65%
- Deployed the model into a flask web application to predict multiple faces emotion in real-time from a webcam

Predicting Effective Arguments | Scikit-Learn, NLTK, Matplotlib, Logistic Regression

- Competed in a Georgia Tech Kaggle's competition to give 6th – 12th graders unbiased feedback on their argumentative texts
- Oversampled argumentative text rating to increase the 'ineffective' class from 17% of data to 33%
- Trained a Logistic regression model on 36,000+ argumentative texts categories to achieve an accuracy of 67%

RELEVANT SKILLS

- Languages: Python, JavaScript, SQL, C++, Java, Lua, C#, C
- Libraries: Pandas, TensorFlow, Spacy, NLTK, Matplotlib, Imblearn, NumPy, Scikit Learn
- Framework & Tools: React.js, BigQuery, Github, Juypter Notebook, VS
- Classes: Data Structures and Algorithms, Unix System, Probability and Statistics in Computer Science