CRISPIN VINCENT LOBO

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EDUCATION

Columbia University New York, NY
MS in Electrical Engineering, CGPA: 4.0/4.0 Aug 2021-Dec 2022
Relevant courses: Machine Learning, Practical Deep Learning System Performance, Big Data Analytics, Neural Networks and Deep Learning, Algorithms for Data Science, Natural Language Processing, Computer Vision, Reinforcement Learning

Dwarkadas. J. Sanghvi College of Engineering, Mumbai University Mumbai, India
BE in Electronics and Telecommunications Engineering, CGPA: 8.89/10.0 Oct 2020
Relevant courses: Image Processing and Machine Vision, Neural Networks and Fuzzy Logic, Database Management System

TECHNICAL SKILLS

Programming: Python, Arduino C, C++, MATLAB/Simulink, JAVA, SQL, Lua scripting
Frameworks: Scikit-learn, Tensorflow, Keras, NLTK, Pytorch, SpaCy, Seaborn, XGBoost, LightGBM, Django, openCV
Other tools: Jupyter notebook, Microsoft Azure, Google Cloud Platform, Github, Tableau, Power BI, Spark, Hadoop

PROFESSIONAL EXPERIENCE

Monsoon CreditTech Pvt. Ltd. Gurgaon, India
Machine Learning Engineer Aug 2020-Mar 2021

- Created machine learning based risk scorecards to assess loan applications to reduce delinquency rates and increase loan approval rates, accomplishing an AUC score of over 0.7.
- Built a model to assess severity of loans at the time of application using Light Gradient Boosting Machine classifier to predict probability of default and static pool analysis to estimate outstanding loan amount at time of default.
- Refined raw data processing and machine learning code bases using Pandas and Scikit-learn, to cut down time required to produce new machine learning models by 50% and diminished bugs identified.

AllinCall Research and Solutions Pvt. Ltd. Mumbai, India
Machine Learning and Natural Language Processing (NLP) Intern Dec 2019-Jan 2020

- Implemented Silhouette housing to determine clusters (K) in the K-means algorithm with Scikit-learn, thereby enhancing efficacy of text data classification for flagship product EasyChat by 25%.
- Extracted entities from customer queries and classified into 12 categories based on a 'sentence variation' dataset, leveraging NLP libraries, NLTK and SpaCy, expanding scope of addressing customer queries.
- Devised an algorithm to generate datasets of over 1000 questions for the Chat-bot to run interviews autonomously.

Mindtree Ltd. Bengaluru, India
Artificial Intelligence Intern Jul 2019-Jan 2020

- Designed a Convolution Neural Network (CNN) model based on TensorFlow and keras with footage from an in-cabin-camera to identify 10 poses of driver distraction and accomplished a F1 score of greater than 0.9.
- Trained CNN with ResNet and InceptionV3 architecture on 22400 images of state-farm dataset.

ACADEMIC PROJECTS

A Comprehensive analysis of Micro-blogging platforms - Twitter vs. Reddit Sep 2021-Dec 2021

- Developed XGBoost Regression models with twitter reddit and yahoo finance data to evaluate impact of market sentiment on stock market prices, attaining an R^2 score of over 0.9.
- Compared twitter and reddit for viral and sensitive topics based on time series, n-gram and vader sentiment analysis.

Question Answer Generation Language Models - A Comparison between GPT-2 and BERT Sep 2021-Dec 2021

- Tabulated comparison of GPT-2 and BERT transformers for question answer generation models qualitatively (intelligibility, grammatically accurate) and quantitatively (F1 score and perplexity).
- Deployed BERT transformer for question answering models achieving an F1 score of 0.83 and perplexity of 2.7365.
- Analyzed performance of 2 transformer models on Factual, Biomedical, and Conversational distributions of test sets.

Intelligent Infant Care Assistant using Deep learning, Audio Processing and IoT Aug 2019-Mar 2020

- Classified mood changing stimuli and overall emotional state of infants by leveraging mini-Xception CNN model trained on the FER-2013 dataset to achieve an accuracy of over 65%.
- Detected infant's cry utilizing Support Vector Classifier and categorized types of cries, deploying Random Forest Classifier, attaining an accuracy of over 70%.
- Published a paper at the *International Conference on Electrical, Electronics, Communication & Robotics Engineering (ICEECR), 2019.*

LEADERSHIP

- Spearheaded the Electronics department for Formula-1 style electric and internal combustion racecars built by Dwarkadas J. Sanghvi College and participated in competitions such as Formula student Germany and Formula Student Austria.
- Established the Driverless Race Car department to convert the Electric racecar into a Driverless racecar.