DEXSON JOHN D'SOUZA

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EDUCATION

Master's of Science, Expected February 2023
University at Buffalo, The State University of New York

- Algorithms Design and Analysis, Operating System, Machine Learning, Algorithms for Parallel and Distributed Systems, Project Development, Modern Networking Concepts.

Bachelor's of Engineering in Information Technology, May 2019
Mumbai University

- Object Oriented Programming(OOP), Software Engineering, Automata Theory, Data Mining, Soft Computing, Intelligent Systems, Image Processing, Computer Networks.

EXPERIENCE

Research Aide, SUNY RF, Buffalo, New York, September 2021 - Present

- Assisted Professor Scott to create an iso-map of metalloids using Matlab9.1.
- Implemented a functionality to develop rankings of 10 metallic elements for a variety of randomly generated inputs.
- Generated correlations of elements with respect to Yield Strength and Ductility of 350 metalloids.
- Created scatter plots and line graphs to show % increase in YS and Ductility of each metal in different temperature range(below and above 800 degree celsius).

Software Developer, Infinite Computing Systems, Mumbai, July 2019 - July 2021

- Collaborated with a team of 5 members to build a Leave and Attendance system using Angular and Node Js.
- Created several modules in a Mobile CRM application using Ionic and SQLite with a team of 10.
- Managed a Career portal web application and executed several functionalities.
- Remodeled queries to reduce execution time from an hour to 10 to15 minutes.
- Designed and formulated a robust and strong backend scripting to design Dynamic forms using Javascript, SQLite and Ionic 5.
- Developed a micro service for authentication of users and to maintain 60 min session of users.
- Introduced a new option for tracking and locating 100's of work orders using Bing Maps.
- Analyzed requirement gathering, participated in testing and UI improvement.

PROJECT

Stock Market Trading using Deep Reinforcement Learning, November 2021 - December 2021

- Constructed a Model leveraging Reinforcement Learning techniques to perform trading on nvidia-2016.1 data.
- Formulated an environment to perform Q-learning consisting of 4 states and 3 steps required for Q-learning.
- Designed an RL agent to study trends and patterns in data and devise a trading strategy to increase it's account value by 40%.

Diabetes Prediction using Machine Learning, August 2021 - October 2021

- Implemented logistic regression from scratch. 77% accuracy was obtained using optimal hyper-parameters.
- Devised a Neural Network with 3 hidden layers with L2 and L1 regularization.
- Trained model with 50000 data samples. 82% accuracy was achieved.

Classical Music classification, January 2019 - April 2019

- Constructed a ML model to identify 4 different genres of classical music.
- Preprocessed and cleaned data for reducing inconsistency, incompleteness and errors in input data consisting of 300 audio files.
- Deployed RNN algorithm to train model and achieve 89% accuracy.

CERTIFICATIONS

- Building Modern Python Applications on AWS provided by Amazon Web Services.
- Data Visualization by University of Illinois Urbana-Champaign.
- Distributed Computing with Spark SQL by UC Davis.