NOEL D'SOUZA

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EDUCATION

Manipal Academy of Higher Education - Manipal Institute of Technology *Manipal, India*
Bachelor of Technology in Electrical and Electronics Engineering | *GPA 8.41/10* July 2016 - August 2020
Minor Specialization: Data Science
Relevant courses: Machine Learning, Data Structures & Algorithms, Data Scientist's Toolbox & R Programming, Introduction to Data Science, Data Science Part II, Advanced Data Science

WORK EXPERIENCE

GE Gas Power *Bangalore, India*
Intern Jan 2020-July 2020
Data Engineering Specialist July 2020-Present

- Designed an ML tool that automated the process of identifying duplicate customer records, processed quarter million records in half an hour and led to improving cash collection time
- Designed and deployed a CV solution to ensure employees wore the required safety gear, implemented object detection and tracking along with designing the data flow architecture. Won a global CIO award for this project.
- Designed a CV solution to monitor if employees were within a certain distance from a suspended load, calculated based on the dimensions and elevation of load
- Used NLP to improve a PII data identification tool to reduce false positives by 60%. Implemented multiprocessing and code optimization to reduce processing time by 50x. Won a global CDO award for this project.
- Worked on upgrades and maintenance of a business-critical in-house Data Lineage tool used by over 1k people

National University of Singapore & HPE *Singapore*
Global Academic Internship Programme: Big Data Analytics using ANNs June 2019

- Built an American Sign Language (ASL) to text translator that ran in real time on a CPU and was robust to lighting conditions and skin color with the final model presented to three NUS faculty

PROJECTS

- **Diabetic Retinopathy Diagnosis**: Developed an ML model to classify retinal fundus images for Diabetic Retinopathy into 5 classes, design included development of image pre-processing algorithm
- **Melanoma Segmentation**: Trained a Mask-RCNN model using transfer learning to segment melanoma from images of skin abnormalities, modified the input layer to accept a 6-channel pre-processed image
- **Ball on Plate:** Lead a team developing a 2-axis of motion plate that balanced a ball using PID control of two motors, with an overhead camera to estimate position, was showcased during the annual college technical festival

SKILLS

Programming Languages: Python, C/C++, SQL, Cypher, Java, R, JavaScript, Shell
Software: MATLAB, Tableau | **Computing Environments**: Linux, AWS

PUBLICATIONS

- "A Multiclass Skin Lesion classification approach using Transfer learning based convolutional Neural Network", 2021 Seventh International conference on Bio Signals, Images, and Instrumentation (ICBSII) (pp. 1-6). IEEE
- "Automated detection of pathological and non-pathological myopia using retinal features and dynamic ensemble of classifiers", 2020 Telecommunications and Radio Engineering, 79(20)

AWARDS

GE Gas Power Chief Information Officer – Deliver with Focus Award March 2021
GE Gas Power Chief Data Officer – Deliver with Focus Award October 2020

ADDITIONAL INFORMATION

Technical Head, Astronomy Club – Founded and led a team that applied ML techniques to astronomical datasets (2018)
PR Head, Astronomy Club – Led a team to manage the club's social media presence and organize guest lectures (2018)
Robotics Competition – placed second as a team of four to build a robot to traverse a maze (ESIGELEC, France) (2018)