ANAS MUHAMMAD

Data Scientist

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Junior data scientist with experience developing machine learning and data-driven solutions through Python, TensorFlow and various cloud services. Familiar with applying principles of agile management to projects and tasks.

EXPERIENCE

Data Scientist

Etisalat Telecommunications

July 2018 – July 2019 Dubai, United Arab Emirates

- Developed Deep Autoencoders for Anomaly Detection after mining and wrangling big data to detect severe network faults (0.02% of raw fault alarms).
- Developed the next best team assignment prediction model with 80% accuracy to automate trouble ticket resolution using XGBoost, improving automation KPI by 10%.
- Used NLP techniques and Support Vector Machines to classify the severity of technical complaints of free-text data type, eliminating manual classification process of complaints.
- Deduced suitable manual trouble tickets to be automated after data wrangling and data mining thus improving automation KPI by 30%.
- Developed network fault type classification models with 85% accuracy to automate trouble ticket assignment using Decision Trees.
- Delivered instructor based training to upskill various levels of engineers on Data Science and AI.

Machine Learning and Robotics Researcher

American University of Sharjah

July 2018 – February 2019 Sharjah, United Arab Emirates

- Developed and wrote a research paper on "Autonomous Drone-based Powerline Insulator Inspection via Deep Learning" project.
- Developed an image recognition project using deep learning with Keras and feature extraction to develop a dataset of 2,000 images for a particular facial expression action unit.
- Extracted LBP, HOG and raw features for emotion recognition through neural networks, XGBoost and Support Vector Machines.

PUBLICATION

Robot 2019 - Fourth Iberian Robotics Conference

First author of "Autonomous Drone-based Powerline Insulator Inspection via Deep Learning"

September 2019 FEUP, Portugal

- Co-developed a drone to autonomously fly over and inspect modeled high voltage lines to aid in human safety and reduce maintenance cost incurred by power line maintenance companies by up to 70-80%.
- Collected and labeled over 2000 images of polluted and clean insulators and trained a pre-trained convolution neural network for image classification on a live video feed using tensorflow and OpenCV.

EDUCATION

Master of Data Science

University of British Columbia

Sep. 2019 – June 2020 Vancouver, Canada

BSc. Electrical Engineering

American University of Sharjah

2013 – 2017 Sharjah, UAE

- GPA: 3.55/4.0
- Scholarships: Dean's List, Chancellor's List and Merit

PROJECTS

Lyrics Transliteration

Leader of a five person team

- Transliteration of text from one language to a phonetic English form by neural machine translation with RNN attention model.
- Web scraped text data and trained a RNN model with attention using tensorflow.

Lecture Videos Organizer

Personal project

- Converting speech to text from lecture videos, each of length 1.5 hours.
- Performed text similarity of transcribed video text with lecture notes to align lecture notes and videos.

TECHNICAL SKILLS

Programming

Python, R, C, Matlab, LaTeX

Data Science

Azure, Data Analysis, Wrangling, Cleaning and Mining, Feature Engineering and Selection, Time series, NLP

Machine Learning

Bayesian Inference, Causal Inference, Deep Learning, Collaborative-filtering, Content-based Recommendation, tensorflow, scikit-learn, keras, H20, MLlib

Visualization

altair, matplotlib, dash, plotly, ggplot, PowerBI

Miscellaneous

MySQL, PostgreSQL, Hive, MongoDB, Docker, Git, Version Control, Make, Web Scraping, Spark, OpenCV