Ricky Martin

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WORK EXPERIENCE

MACHINE LEARNING ENGINEER   Jan 2022 - Present
Ardent MC
- Led the creation and deployment of a scanned document classifier using AWS Textract OCR tool and XGBoost classifier on heavily skewed data, achieving F1 score of .92 after employing SMOTE techniques, built in AWS
- Built time-series forecasting model to query/monitor 5000+ login data points form Splunk, accessing security risk
- Overseeing the R&D of prediction based LSTM model to dynamically manage and allocate network resources to decrease various application processing times from an average 166 seconds to under 30 seconds
- Used SQL and PySpark to explore patterns/trends of bias on 5 million+ application results within Databricks

DATA SCIENCE INTERN   Oct 2020 - Oct 2021
Redica Systems (Formerly Govzilla)
- Produced production-level Unsupervised DBSCAN algorithm in Python to cluster incoming FDA inspection reports, utilizing TF-IDF techniques in order to separate documents by similar subjects
- Created and presented weekly easy-to-digest customizable Machine Learning model visualizations in Tableau showcasing live data analytics and KPI visualization as requested per customer
- Rebuilt semi-supervised document classifier increasing accuracy from 85% to 91% through feature engineering

ROBOTICS RESEARCHER (Machine Learning Specialization)   May 2019 - Jul 2021
Bioinspired Robotics and Design Lab
Co-Author for Published Paper in 2020 IEEE-RAS International Conference on Soft Robotics
- Spearheaded the technical construction of 5 distinct iterations of affective touch-based artificial skins using Arduino Uno, force sensors manufactured in lab to mimic/recreate human mechanosensory neurons, and Python/C++ data pipeline to clean, transform, train, and test various Supervised Deep Learning models on live touch based categorization to achieve an average 93% accuracy across different users and skin mediums
- Built a Random Forest parameter tuning pipeline that utilizes impactful features for 200% faster classification

DATA SCIENCE INTERN   Oct 2019 - Oct 2020
GoSite, Inc.
- Deployed end-to-end Production-level Python algorithm that scored batches of new leads on likelihood of purchasing website development services using KNN regression model based on past conversion data

PROJECTS

DIY CHATBOT
- Created, dockerized, and deployed customizable CICD chatbot built from the ground up using Python, NLTK, and Pytorch deployed on personal portfolio website through GitHub, Flask, and Heroku

ROBOT ORGANIZER
- Applied Q-Learning Reinforcement Learning techniques to allow a warehouse sorting robot arm to learn and find optimal path through an artificially created maze via UARM Python API (robot arm control API)

TECHNICAL SKILLS

Frameworks/Libraries: NumPy, Pandas, Sklearn, Matplotlib, Seaborn, OpenCV, TensorFlow, Keras, NLTK
Technologies: Git, Jupyter, Docker, Databricks, Kubernetes, Spark, AWS, H2O, Tableau, Arduino, Linux-Ubuntu

EDUCATION

University of California, San Diego (UCSD)   Graduated July 2021
B.S. in Cognitive Science with a specialization in Machine Learning