EMMANUEL RODRIGUEZ

DATA SCIENTIST

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SKILLS

DATA SCIENCE: SQL, Jupyter Notebook, Natural Language Processing, Tensorflow, Keras, Tableau, Selenium, BeautifulSoup, AWS Cloud Computing, Word Embeddings, Linear Regression, Classification Algorithms, Clustering Algorithms, Ensemble Learning, Deep Learning, Neural Networks
COMPUTER SCIENCE: Python, Java, JavaScript, C++, Searching and Sorting Algorithms, Object Oriented Programming, Unit Testing
MATHEMATICS: Probability & Statistics, Applied Statistics, Set Theory & Logic, A/B Testing, Gradient Descent

PROJECTS

Spotify Top 100 Classification
Supervised classification project using Spotify's API to scrape 1000 songs' characteristics as features to predict whether a song will hit the top 100 or not. Utilized Random Tree Forest, SMOTE sampling, class weights, feature engineering, and F-Beta as a metric with a heavier weight on Precision.

Podcast Recommender & Topic Modeling
An unsupervised topic modeling project where 700 podcast transcripts were scraped from "This American Life" in an effort to classify them into topics and make a recommendation app. Used TF-IDF and NMF for the first portion, and worked with a Word Embedding Neural Network and cosine similarity for the recommendations in the Flask app.

Board Game Geek Regression Analysis
Supervised regression project where 1000 board games were scraped and used their characteristics as features to predict an engineered target variable, average number of plays upon purchase, essentially determining if the game is worth the purchase or not. Built a Linear Regression model with polynomial features, Lasso Regression, and RMSE as a metric for success.

EXPERIENCE

Metis Data Science Bootcamp
Data Scientist · June 2020 to Sept. 2020 · New York, NY
Metis is a 12-week immersive program that provides Data Scientists with up-to-date real-world experience through a series of 5 projects. These experiences include the following.
- Write code using Jupyter notebooks, apply version control with Git and GitHub, perform exploratory data analysis with the pandas Python package, and visualize results with Matplotlib.
- Web scrape to gather data and use modules from SciKitLearn to apply regression theory
- Query relational databases using SQL, and work with non-relational databases such as NoSQL and MongoDB
- Apply machine learning algorithms such as KNN, logistic regression, SVM, Naive Bayes, decision trees, random forests, and gradient boosting for supervised learning.
- Build interactive data visualizations using Business Intelligence tools.
- Explore unsupervised learning on Natural Language Processed text with clustering algorithms such as K-means, hierarchical clustering, and DBScan, and explore dimensionality reduction techniques such as Principal Component Analysis.

North Bergen School District – Mathematics Department
High School Math Teacher · May 2017 to Current · North Bergen, NJ
- Teach high school level math and computer science to 75 students on average. Topics taught include Java, Probability and Statistics, Pre Calculus, Algebra, and Geometry
- Manage rooms of up to 30 teenagers ensuring safety, communication, and comprehension
- Design curriculum independently for a new class of prospective mathematicians
- Collaborate with colleagues to rewrite curriculum and weekly lesson plans
- Provide resources and support to students to facilitate development of personal goals
- Maintain safety and security of halls and classrooms while completing duty responsibilities
- Facilitate after school programs promoting personal growth and collaboration through self expression, community engagement, and problem solving
- Scheduled virtual, audio, and in person meetings to discuss parents' concerns

William Paterson University - Computer Science Department
UNIX Lab Assistant · Sept. 2014 to May 2015, Sept. 2014 to May 2015 · Wayne, NJ
- Executed administrative (super user) commands to maintain a sturdy, current system
- Researched and recommended software to acquire the knowledge needed to download and utilize Intel Parallel Studios XE for the campus (e.g. Virtual Machines, Multicore Processing/Multithreading, Malware, and Antivirus)

High Tech High School
IT Associate · July 2011 to July 2012 · North Bergen, NJ
- Regularly maintained over 100 student and staff Windows computers including upgrading software, CPUs, memory chips, and other hardware
- Documented usernames, passwords, and inventory using Excel

EDUCATION

William Paterson University · Sept. 2012 to May 2016
Computer Science 2016
Dean's List