Malcolm Taylor

U.S. Citizen

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EDUCATION

Boston University, Questrom School of Business — *M.S. Mathematical Finance* — Jan 2017

University of Illinois at Urbana- Champaign — *B.S. Mechanical Engineering* — May 2015

New York Data Science Academy, Big Data and Hadoop 6 Week Workshop — Aug 2017

EXPERIENCE

Marcus by Goldman Sachs, New York, NY - Decision Science — 2018 - Present

- Built logistic regression model for targeting direct mail prospects to apply for personal loan; Selected 10 attributes from set of 1300 attributes using LightGBM and Bayesian optimization; Found additional 7% of high responders in eligible mail pool to mail after doing swap analysis compared to previous strategy
- Built logistic regression personal loan underwriting model to assess the credit worthiness of customers at application; Reduced estimated losses by 0.7$ mil/month, rejected additional 13%
- Built portfolio XGBoost credit risk model for loan product cross sell and risk strategy purposes; Used recent credit bureau attributes and trended attributes to update risk score every month; Created data pipeline to combine data from 5 different sources, score the model and publish to database for multiple team use
- Created interactive web-based dashboards using python to track model performance and stability; Ensured model performance did not fall below threshold before needing to refit model; Built automated pipeline to gather data from HDFS using PySpark, perform calculations in pandas and deploy dashboard to intranet using Dash

Argus Information and Advisory Services, White Plains, NY - Modeling Team — 2017 - 2018

- Explained patterns in large data sets by using decision trees, linear regression and variable reduction to build explanatory, stable ensemble model
- Created ensemble models to predict the amount an account would spend on a given card type with over 700 variables from different sources using SQL, SAS, and R
- Implemented Gradient Boosted Tree modeling process for variable reduction and robust, stable models for various credit card attributes using R and H2O modeling platform
- Reduced team documentation time by automating document formulation from macro-enabled Excel workbooks using Python

PROJECTS

Tinder Data Analysis (Python) , Bronx, NY – Personal Project — 2019

- Generated interactive customizable report about personal Tinder usage, messages overall and over time; evaluated custom KPI's such as number of messages over time and word frequencies
- Made dashboard available via internet using AWS elastic beanstalk and Python Dash framework
- Found most active period (app opens, matches and messages) was during Spring of Senior year of college; Found most common first phrases and cycles in dating history

Full Stack Note Taking Web App (AWS Node.js, React), Bronx, NY – Personal Project — 2019

- Created note-taking app that allows a user to create a profile where text and image notes can be created, stored and retrieved
- Followed tutorial from ServerlessStack.com to create backend of Amazon Web Services (AWS) products including S3, Lambda, Cognito with a react front end

Spotify Lyrics Analysis (Python, NLP), Bronx, NY – Personal Project — 2018

- Created images that show song similarity based on lyrics using pre-trained word embeddings, T-Distributed Stochastic Neighbor Embeddings and K-nearest neighbors (KNN)
- Linked Spotify API for user playlist information with Genius API for song lyric information to create personalized application

SKILLS

Python, SQL, PySpark, Statistical and Regression Analysis, AWS

INTERESTS

Salsa Dancing, Sailing, Tennis