

Malcolm Taylor

U.S. Citizen

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EDUCATION	Boston University , Questrom School of Business	<i>M.S. Mathematical Finance</i>	Jan 2017
	University of Illinois at Urbana- Champaign	<i>B.S. Mechanical Engineering</i>	May 2015
	New York Data Science Academy, Big Data and Hadoop 6 Week Workshop		Aug 2017
EXPERIENCE	Argus Information and Advisory Services , White Plains, NY - Modeling Team Associate		2017
	<ul style="list-style-type: none">Explained patterns in large data sets by using decision trees, linear regression and variable reduction to build explanatory, stable ensemble modelCreated 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 RImplemented Gradient Boosted Tree modeling process for variable reduction and robust, stable models for various credit card attributes using R and H2O modeling platformReduced team documentation time by automating document formulation from macro-enabled Excel workbooks using Python		
	Charles River Development , Burlington, MA – Scenario Analysis Business Analyst Intern		2016
	<ul style="list-style-type: none">Interpreted high level software requirements for developers by creating screen mockups to reduce product iterations and to gather team feedback rapidlyDesigned scenarios to mimic economic shocks for the Solvency II European regulations using Charles River Investment Management platformPrototyped mathematical calculation for implementation of factor models using R scripts and SQL to test java implementation of functionalityInformed team of potential product direction by conducting market research on competitor scenario analysis products to enhance internal awareness of industry trends		
PROJECTS	Wine Quality Bayesian Analysis (Python) , Bronx, NY – Personal Project		2017
	<ul style="list-style-type: none">Analyzed dataset of 11 wine chemical components and the quality ratings for 1600 pairingsUse logistic regression and random forest to create a baseline for the model – found sugar and alcohol to be most important variables when selecting high quality from low quality winesUsed Bayesian logistic regression to analyze the effect of a prior on the analysis		
	Rental List Inquiries (R) , Bronx, NY – Kaggle.com		2017
	<ul style="list-style-type: none">Predicted interest for listings given 13 categories of information about listings from apartment rental website RentalHop.com - data included apt description, price and other numeric fieldsUsed sentiment analysis, time date information, with gradient boosted tree algorithm to obtain test sample log-loss of 0.732; lowest log loss on Kaggle.com was 0.492Used Random Search through parameters in gradient boosted tree using H2O platform for parallel computations; found optimal parameters to minimize log loss		
	Abalones Age Prediction (Python) , Boston, MA – Personal Project		2016
	<ul style="list-style-type: none">Predicted age category of abalone sea creature using 4100 observations about the dimensions and various weights of the creature- 7 original variables in data setUsed KNN, logistic regression and random forest algorithms; found cross validation accuracy of 65% for most algorithms		
	UnderArmour Stock and Stephen Curry Regression (R) , Boston, MA – Personal Project		2016
	<ul style="list-style-type: none">Used OLS and PCA regression on Stephen Curry basketball performance data to find correlation with his sponsor UnderArmour's overnight stock returns; obtained adjusted R^2 of 38.1%Found field goals and assists were significant predictors of stock log returns in OLS regression		
	VIX Forecasting- Monte Carlo Bayesian Simulation (R) , Boston, MA – Boston University		2016
	<ul style="list-style-type: none">Predicted VIX price using an AR(3) model and 3 years of weekly historical data by sampling from the distribution of the model coefficientsEnsured model stability by back testing model against VIX data starting from 1990; Found the model mean overestimated 83% of the historical returns		
SKILLS	Python, R, SQL, Bayesian Inference, Deep Learning, Statistical Analysis, Regression Analysis		
INTERESTS	Salsa Dancing, Sailing, Tennis, Physics Tutoring		