

Patrick S. Murphy

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EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY

MASTERS OF SCIENCE IN ANALYTICS

December 2018 | Atlanta, GA
Computational Data Analytics

UNIVERSITY OF NOTRE DAME BBA IN FINANCE

May 2015 | Notre Dame, IN
Supplemental Major in Applied
Mathematics and Statistics

COURSEWORK

GRADUATE

Analytical Models
Python for Computing
Regression Analysis
Deterministic Optimization
Information Visualization
Data and Visual Analytics
Data Analytics for Business
Marketing Analytics and Pricing Strategy
Time Series Analysis
Machine Learning

SKILLS

ADVANCED KNOWLEDGE

- Python: NumPy, SciPy, Pandas, Scikit-learn, Tensorflow, Matplotlib, Seaborn, Bokeh
- R: caret, rpart, randomForest, glmnet, tree, dplyr, ggplot, MASS, tseries, car
- JavaScript: d3.js
- Excel: Financial Modeling, Optimization

WORKING KNOWLEDGE

SQL • Matlab • XPress • Arena • Tableau
Spotfire • Gephi • Hadoop • Spark • Pig
AWS • Openrefine

ANALYTICAL TECHNIQUES

Classification • Clustering • Time Series • Regression • Tree-based models • Variable Selection • Simulation • Linear and Integer Optimization • Markov Chains • PCA • SVD • Cross-validation • Machine Learning • mapReduce • Random Forest • Neural Networks • Boosting • Naive Bayes • A/B Testing

OTHER

Essbase • Hyperion • Smartview • LaTeX

INTERESTS

Sports fan experience • Performance Analytics • Travel • Credit cards

SUMMARY

Incoming Data Science Manager at USA Swimming. Completing final MS Analytics requirements for December 2018 graduation.

EXPERIENCE

GENERAL ELECTRIC FINANCIAL MANAGEMENT PROGRAM

POWER SERVICES HQ INCOME STATEMENT FP&A ANALYST

Jan 2017 – Aug 2017 | Atlanta, GA

- Led weekly income statement pacing of \$15B business with ten reporting regions through Excel macros, templates and Tableau visualizations.
- Assisted base cost team in efforts to reduce base cost by 15% year over year.

POWER SERVICES CSA RISK ANALYST

Jul 2016 – Jan 2017 | Atlanta, GA

- Assisted leadership in pacing, using forecasting risk models to reduce \$6.6B of deferred revenue through factoring and other commercial actions.
- Led billing system automation and sent frequent analytics reports to team.

DISTRIBUTED POWER MANUFACTURING AND FINANCE ANALYST

Jan 2016 – Jul 2016 | Waukesha, WI

- Owned Plant and Equipment: developed predictive model for depreciation of 5,400 assets and 1,800 accelerating assets due to Oracle limitations.

POWER HQ TRANSFER PRICING ANALYST

Jul 2015 – Jan 2016 | Atlanta, GA

- Built 10-year bottoms-up DCF predictive model using Hyperion's lowest detail to forecast GE-Alstom Transfer Pricing, resulting in TS valuation of \$44.7B.

PROJECTS

GEORGIA TECH ATHLETICS TICKET PRICING OPTIMIZATION

In Progress

- Collaborating with Georgia Tech athletics to optimize revenue from ticket sales, maximize fan engagement, and improve marketing strategy.
- Building tree-based regression model to predict customer willingness.
- Creating D3 visualization of Bobby Dodd Stadium with willingness to pay predictions by section for each football game in 2018.

FIFA LOGISTIC REGRESSION

Aug 2017 – Dec 2017

- Wrangled data from Kaggle SQLite database through merge, join, and group-by.
- Regressed home team win binary variable on FIFA video game attributes to calculate probability of home team win in R with prediction accuracy of 61.7%.

RECIPE VISUALIZATION

Aug 2017 – Dec 2017

- Scraped recipe data from Serious Eats and created ingredient match rating.
- Created interactive D3 visualization displaying similar match recipes.

LEADERSHIP

GEORGIA INSTITUTE OF TECHNOLOGY VARSITY SWIM TEAM

Assistant Swim Coach | Aug 2017 – Present | Atlanta, GA

UNIVERSITY OF NOTRE DAME VARSITY SWIM TEAM

Men's Team Captain | May 2013 – Mar 2015 | Notre Dame, IN

- Developed key skills of self-awareness, commitment, and communication.