

EDUCATION

Columbia University, B.S. Operations Research (2012)

Duke University - Fuqua School of Business, Ph.D. Business Administration - Operations Management (2019)

WORK HISTORY

2014 - Present, Duke University-Fuqua School of Business, Graduate Research and Teaching Assistant in Operations Management.

- My research focus is on using applied game theoretic models to study supply chain structures and contracting decisions for information goods platforms. I served as the TA for the Executive MBA program's Core Operations course, mentored undergraduate data/stats hackathon teams and served as the Business School PhD Program Representative on the Duke Graduate and Professional Student Council.

2018, Zillow Group, Economic Research Data Science Intern

- Built in R the research division's first housing inventory forecasting model using data from Zillow, the Census and public records. Methods I implemented in this analysis include Bayesian structural model, ARIMA, randomForest, clustering and BNN.
- Built and shipped R package for Zillow Econ's commonly used functions
- Creating HMM for clickstream data analysis on HackWeek project to understand conversions of Zillow visitor to paid Zillow services customer and teaching relevant topics about probability models to SDE team members

2016, Amazon.com, Research Scientist Intern (Supply Chain Optimization Tech)

- Prototyped in R a forecasting model for identifying how much additional warehouse space of different kinds need to be leased for Q4 holiday shopping inventory in the US
- Worked cross-functionally with PMs, in-stock managers, and software engineers to gather requirements, understand data and document so it could be put into production

2012-2014, IBM, Strategy and Operations Consultant

- Project: Data Analysis and Transformation at a Major US Investment Bank
 - Profiled Mortgage Bank Capital Markets data, researched and documented requirements, performed deep dives on data problems, helped roll out JIRA for the team
- Project: Risk Management & Strategic Planning at a Major Canadian Investment Bank
 - Assessed, identified, and created dashboards for process maturity across risk, product development and process controls assessments tailored for trading desks
 - Interviewed and gained buy-in from US heads of each trading desk for initial risk assessment and future follow-up assessments
 - Identified risk management development roadmap for closing gaps between the client and its competitors, especially in high risk areas
- Project: Data Architecture and Digital Transformation at a Major US Insurance Company
 - As Data Architect II, I mapped, modeled and oversaw migration of client's customer data from siloed legacy databases to a single-source data system using canonical messaging middle-layer that interfaces between applications and data warehouse to improve customer service experience. Managed on-site data mapping team
 - As Program Manager, I managed off-shore development team, managing workforce analytics, expense planning, project management for multiple teams

EXPERIENCE WITH

R, SQL, AMPL/Cplex/Gurobi, Excel/VBA, WRDS Compustat, Python, LaTeX, Tableau, Matlab, Mode, Hive/Oracle/MSSQL/Teradata DB, Qualtrics, Markdown

PUBLICATION

"Revenue Sharing and Subscription Platforms for Digital Content Distribution," with R. Swinney (preparing edits for resubmission at Management Science)

"Supply Chain Design for Substitutable Digital and Physical Information Goods," with R. Swinney (preparing for submission to Management Science)