Zhongyan (Daniel) Liang

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Education and Coursework

American University Sept. 2018 - May 2020
Master of Science in Biostatistics, STEM

University of Maryland College Park Graduated 2017
Bachelor of Science - Nutrition and Food Science

Relevant Coursework
Machine Learning, GLM, Regression, Advanced Biostatistics, Data Science, Business Analytics

Skills

Coding Languages: SAS (Base and Advanced Certified), R, SQL, Python
Software: Tableau, Advanced Excel (Certified), SPSS, SAS Enterprise Guide
Technical Specialties: Web-scraping, Data Warehousing, Predictive Analytics, Regression, Big Data, Pricing & Budgeting Analytics, Data Visualization, Dashboard Reporting Automation, Markov Chains
Languages: English, Chinese (Mandarin)

Professional Experience

Capital One **McClean, VA**
Senior Business Analyst February 2022 - Present

- Writes complex SQL queries in Snowflake to transform data into a usable format for analysis
- Creates Tableau and Quicksight dashboards to present data delivering actionable business insights across teams
- Works closely with IT and HR to deliver data science solutions helping firm leadership make business decisions
- Validates and optimizes model accuracy using Random Forest, Larsso, LDA machine learning algorithms in R
- Developed data pipeline in Databricks to automatically ingest, store and process data from AWS platform
- Assisted with design and implementation of operational and system enhancements to ensure mobile / web platform production capabilities
- Built an ordinal logistic regression model with survey data to determine key factors that contribute to platform user popularity

Centurion Health **Vienna, VA**
Data Analyst Jan. 2020 - Jan. 2022

- Assisted with the development of a SARS-CoV-2 tracking, analytics and reporting platform to support prioritization of medical resources
- Designed experiments to explore the link between COVID cases, population, age, race, etc. in SAS
- Partnered with finance to optimize forecasting capabilities of pharmacy budgeting and accruals in R
- Crafted SAS code to analyze healthcare utilization and prescription spending among inmate-patient populations
- Employed Tableau for visualized analysis of leadership and staff programs, optimizing effectiveness, efficiency and helping to inform key corporate decisions
- Built a regression model to predict prescription demand by evaluating patient and prescriber prescription patterns
- Customized Excel templates using complex formulas, macros and VBA to match client specific requirements

Projects and Research

Statistical Research Assistant for the "Algorithms for Threat Detection" Project Jan. 2019 - Dec. 2019

- Used Markov Random Field to build logistic regression models from 911 call data during 2015 Baltimore riots
- Applied pseudo-likelihood estimation to maximize essential parameters to detect change points
- Predicted possibility of large-scale violence through detection of change-points in Markov Chains
- Conducted tests such as VIF, Stepwise Variables Selection, Linear and Quadratic Discriminant analysis, KNN, and Random Forest to cross-validate and further optimize the model