MARY **SOLOMON**

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EXPERIENCE

DATA SCIENTIST, DUKE UNIVERSITY (DURHAM, NC)
JULY 2021-JUNE 2023

- Collaborated with 5 cross-functional teams, including clinicians, statisticians, and stakeholders across 7 projects.
- Developed and deployed a predictive model, optimizing the scheduling for around 50 Rheumatology visits per month by recommending telehealth appropriateness.
- Leveraged Electronic Health Record data to identify and address disparities in patient experiences, focusing on racial, ethnic, and economic dimensions.
- Quantified a 32% reduction in maternal morbidity through data-driven analysis of clinical interventions.
- One of two fellows sponsored by Microsoft for the AI Health Data Science Fellowship program.

DATA SCIENCE INTERN, UVA BIOCOMPLEXITY INSTITUTE (ARLINGTON, VA)
MAY 2020-AUGUST 2020

- Applied Natural Language Processing and Social Network Analysis to glean insights from a historical text dataset of 10,000 records, revealing sentiments of American soldiers during WWII regarding race and gender relations.
- Developed a Shiny dashboard in R to monitor 4 indicators of economic mobility for the South Wasco Alliance, a civic engagement organization.

DATA SCIENCE INTERN, OWENS-ILLINOIS (PERRYSBURG, OH)
MAY 2018 – AUGUST 2019

- Designed Python-based data pipelines integrating Twitter and Azure APIs, enabling collection and analysis of Twitter data for business insights related to consumer sentiment on glass products.
- Constructed a data pipeline, using R and Power BI, to visualize data from 3 sources, tracking the life cycle of glass bottles at the Sao Paolo manufacturing plant for enhanced quality assurance.

RESEARCH ASSISTANT, UNIVERSITY OF MINNESOTA (MINNEAPOLIS, MN)
JUNE 2017 – AUGUST 2017

- Formulated hypothesis, shaped experimental design, and designed chatbot behaviors for a user study examining the influence of intelligent agent factors on group decision-making.
- Presented research findings at the Summer Undergraduate Research Expo.

PROJECTS

MULTIVARIATE ANALYSIS OF KOREAN POP MUSIC AUDIO FEATURES, MASTER'S THESIS

- Curated a dataset of 12,012 Korean pop songs and their audio features using Python and the Spotify API.
- Applied statistical methods such as hypothesis testing, PCA, K-means clustering, and regression to examine how audio features define the genre of Korean pop and contribute to its global popularity.

MARKET RESEARCH ON STUDENT CONCERT ATTENDANCE AT BGSU'S COLLEGE OF MUSICAL ARTS, CAPSTONE

- Conducted independent marketing analytics study yielding actionable insights for increasing concert attendance.
- Applied A/B testing to measure differences in perceptions and incentives between new and regular concert attendees.

SKILLS

PROGRAMMING: R (dplyr, ggplot, caret), Python (NumPy, Pandas, scikit-learn), Git, SQL, C++
SOFTWARE: RStudio, Jupyter Notebook, Visual Studio, PowerBI, Microsoft Suite
METHODS: Machine Learning, Clustering, Classification, Predictive Analytics, Multivariate Analysis, Natural Language Processing

EDUCATION

BOWLING GREEN STATE UNIVERSITY, (BOWLING GREEN, OH)
M.S. Applied Statistics | GPA: 3.8 | August 2019 – May 2021 | HONORS/AWARDS**:** 2021 Charles E. Shanklin Colloquium 2nd Place Paper Presentation, 2020 Excellence in Teaching Award
B.S. Data Science, Music Minor | GPA: 3.9 | August 2015 – May 2019 | HONORS/AWARDS: 2018 Business Analytics Competition 2nd Place, 2017 CRA-WP GHC Research Scholar, 2017 Miami Data Fest Finalist