Hanna Hamilton

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Experience

Deloitte *Remote*

Consultant *March 2023 - Present*

- Completed Deloitte's AI Academy, a comprehensive nine-month course covering core data foundations, artificial intelligence (AI), ethical application of AI, and applied AI in industry and business
- Automated several reporting processes by creating scripts, verifying automated reports, scheduling recurring data refreshes, and coordinating with the DevOps team
- Created Tableau dashboards and fulfilled ad hoc data requests

Replate *Remote*

Data Scientist *January 2021 - September 2022*

- Informed pricing strategy by presenting insights from a cost analysis to C-level executives and various departments
- Implemented Tableau as Replate's data visualization tool while managing a data science intern
- Designed and delivered monthly reports for 3 departments and fulfilled ad hoc data requests by extracting data from 5+ sources, assessing data quality, and building dashboards
- Automated calculations for KPIs and common data requests by building the codebase for Replate's data department
- Co-developed a matching algorithm which effectively determines food donor/recipient pairs and assigns drivers based on location, availability, and preference data for any given day and city

Georgia Institute of Technology *Remote*

Graduate Teaching Assistant *August 2020 - August 2021*

- Supported a class of 350+ students as an assistant teacher for Regression Analysis, a graduate course in the H. Milton Stewart School of Industrial and Systems Engineering
- Led weekly office hours, created assignments and exams, graded exams, and answered questions on the online discussion board

NCR *Remote*

Analytics Practicum Project Consultant *August 2020 - November 2020*

- Worked with classmates to improve and automate merchant operations for NCR with machine learning models
- Classified product catalog entries across merchants into a consistent set of groupings by implementing a similarity-based multi-step model
- Identified meaningful relationships between products by implementing the apriori algorithm and a graph convolutional network algorithm

Skills

Programming Python, SQL, R, JavaScript, MATLAB
Techniques Supervised and Unsupervised Learning, Variable Selection, Optimization, Statistical Analysis, Network Analysis
Visualization Tableau, D3.js, Matplotlib, Seaborn, Excel, MiniTab

Education

Georgia Institute of Technology *Atlanta, GA*

M.S. in Computational Data Analytics *December 2020*

- GPA: 3.8

University of Wisconsin-Madison *Madison, WI*

B.S. in Industrial Engineering *December 2018*

- GPA: 3.4

Academic Projects

Network Analysis for Return to Campus Decisions *Remote*

Georgia Institute of Technology *May 2020 - May 2021*

- Informed Georgia Tech's return to campus decisions during the COVID-19 pandemic by analyzing student connections through courses with ISyE professors and other students
- Developed network connectivity and in-person instruction metrics to evaluate various hybrid instructional mode strategies from health and academic perspectives
- Compared these strategies in terms of network connectivity, in-person instruction, their impacts on various groups of students, and based on the trade-off between network connectivity and in-person instruction
- Co-authored "Revisiting the small-world property of co-enrollment networks: A network analysis of hybrid course delivery strategies" (Link to published article: https://www.sciencedirect.com)

Predicting Airbnb Prices and Quality in New York City *Remote*

Georgia Institute of Technology *March 2020 - April 2020*

- Worked with classmates to build models that predict Airbnb prices and quality in New York City
- Used random forest regression and logistic regression to build the models

Analysis of Small Odd-Set Constraints in Maximum Weight Matching

Remote

Georgia Institute of Technology

March 2020 - April 2020

- Implemented an optimization model for the maximum weight matching problem
- Solved the linear relaxation and explored the probability of obtaining an optimal integer solution for various numbers of vertices
- Increased the probability of obtaining an optimal integer solution by adding small odd-set constraints
- Explored and compared various approaches for reducing the computation time

Predicting H-1B Visa Application Outcomes

Remote

Georgia Institute of Technology

February 2020 - April 2020

- Worked with classmates to build an ensemble model that predicts the outcome of an H-1B visa application
- Combined logistic regression, support vector machines, and k-nearest neighbors to build the ensemble model

Multi-Period Blend Scheduling Optimization

Madison, WI

University of Wisconsin-Madison

February 2018 - December 2018

- Researched various formulations for the multi-period blend scheduling optimization problem
- Applied decomposition methods and found smaller optimality gaps than traditional solvers for mixed-integer nonlinear problems

Volunteer Experience

Replate

Remote

Data Science Volunteer

September 2022 - Present

- Automating data processes for internal reports and recurring data requests