

KATHERINE EMILY SIMON | DATA SCIENTIST

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SUMMARY

Highly conscientious data scientist and former math educator that strives to apply my background to solve complex technical problems at mission focused organizations. I am looking for a chance to contribute and grow my technical skills in [technical skills listed here] and to use data to make a difference in my community.

SKILLS

Coding: Python, Pandas, Numpy, Scikit-learn, Streamlit, SQL, Web Scraping, Pyspark

Machine Learning: Regression, Classification, Natural Language Processing, Neural Networks, Unsupervised Learning

Data Visualizations: Matplotlib, Seaborn, Polypplot, Geopandas, Geoplot

Software: JupyterLab, Slack, Microsoft Office, GitHub, Google Suite

DATA SCIENCE PROJECTS

During my time at General Assembly, I leveraged advanced data science analysis and modeling techniques to solve real-world problems, including 20 labs and 6 large-scale projects. These projects include but are not limited to:

California Department of Education

- Used Python and Pandas to analyze data from the California Department of Education and Free and Reduced Lunch program to form insights about impact of poverty on standardized testing in California.

Housing Prices

- Constructed Multiple Regression model to predict house prices in Ames, Iowa with a Root Mean Squared Error of around \$25,000.

Reddit

- Classified Reddit comments from r/todayilearned and r/askscience subreddits with an accuracy score of 85% using NLP modeling techniques

DATA EXPERIENCE

Data Science Immersive Fellow

Remote

General Assembly

09/2021 - 12/2021

- Completed a 13-week, 500 hour immersive data science course to develop skills in Python programming, data visualizations, statistical modeling and supervised and unsupervised machine learning.
- Conducted exploratory data analysis, created visualizations to understand data, and performed data cleaning and feature engineering on large datasets to prepare for modeling.
- Gained expertise building models, tuning models, and evaluating models for regression, classification, ensemble methods, natural language processing, computer vision, and neural networks to develop models that best solve specific business problems. Deployed the most optimal models to Streamlit applications for external use.

Senior Actuarial Analyst

New York, NY

USI Consulting Group

07/1998 - 09/2001

- Performed EDA, quantitative analysis and maintained client relationships
- Passed Society of Actuaries, Course 1 - Mathematics Foundation of Actuarial Science November 1998

ADDITIONAL EXPERIENCE AND VOLUNTEERING

From 2002 through 2021, I taught high school math in public school districts in North New Jersey for 10 years. I instructed Algebra II at accelerated, general, and core levels as a solo teacher and as a co-teacher. I instructed a data driven basic skills course to ensure passing of High School Proficiency Assessment. At Ridge High School in Basking Ridge, NJ, I researched, developed and implemented a data driven course for students who completed Algebra II, but were not ready or interested in taking precalculus. The course included but was not limited to:

- Projects were developed to build on prior knowledge by incorporating real world situations. One example in Students researched, modeled and interpreted results for real world situations including using linear functions to model fuel efficiently for cars.

- Discrete mathematics projects and topics were researched, developed and implemented including voting techniques, creating a shortest route for deliveries.

Coordinator Pre-K Program | Grandview Elementary School | North Caldwell, NJ 2013, 2015, 2016

- Coordinated volunteer Pre-K program of 25 parents to ease the transition to kindergarten for 50 children.

Board Member | Temple Shalom of West Essex 9/2017 - 6/2019

- As a member of the Education Committee, assisted in the hiring of the Religious school director as well as advising the director, Rabbi and Cantor with religious school and children programming.
- Coordinated 15 activities at a local Purim Carnival and organized adult and teen volunteers.

EDUCATION AND CERTIFICATIONS

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- **General Assembly** | Data Science Immersive | Remote 9/2021 - 12/2021
 - **Teachers College, Columbia University** | MA in Mathematics Education | New York, NY 9/2001 - 10/2002
 - **Tufts University** | BS in Mathematics | Medford, MA 9/1992 - 6/1996