KATIE HOUSE

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WORK EXPERIENCE

Data Scientist, MassMutual   **Dec 2021 - Present**

- Built MassMutual's first internal AI advisor virtual assistant using Azure OpenAI which is now accessible to 13,000 field advisors
- Led the scope, exploratory data analysis, development, pilot, production, and model monitoring of 5 end-to-end machine learning solutions realizing over $2.4M in value
- Developed an advisor success classification model that, over a year-long pilot in 7 firms, saw an average monthly lift in profitability of $77,000 between the high and low scorers
- Submitted a patent application for work in Mixed Media Model optimization of marketing spend
- Won the 2022 MassMutual Python Month of Code competition competing against 7 teams

Jr. Data Scientist, MassMutual   **Jun 2020 - Dec 2021**

- Spearheaded the production of a Marketing Mix Model (MMM) for Haven Life that optimized marketing spend and saved an average of $963 marketing dollars per policy in the pilot period
- Optimized the allocation of over $13M of MassMutual's marketing spend in both digital and non-digital channels using non-linear constrained optimization and regression modeling

Research Assistant/Programmer, Reich Lab   **Apr 2018 - May 2020**

- Built the original COVID-19 Forecast Hub, a centralized repository for COVID-19 forecasting in collaboration with the CDC, which has been referenced in over 100 news outlets including the NYTimes and FiveThirtyEight
- Presented a poster on forecasting at the Models of Infectious Disease Agent Study (MIDAS) conference

EDUCATION

Master of Science in Computer Science, Data Science Concentration   **Jan 2018 - Dec 2019**
University of Massachusetts Amherst   3.7 GPA

Bachelor of Science in Industrial Engineering, Business Minor   **Sep 2012 - May 2017**
Northeastern University   3.8 GPA

TECHNICAL SKILLS

- **Data Science:** LLMs, ensemble models, neural networks, optimization, hypothesis testing
- **Technologies:** Azure, AWS, Scikit-learn, Pandas, Git, Jenkins CI/CD, Docker
- **Languages:** Python, SQL, R, JavaScript, HTML, CSS

OTHER RELEVANT EXPERIENCE

- **Publications:** Co-authored 5 publications on the COVID-19 forecasting hub, one of which has over 200 citations and 19,000 views
- **Volunteering:** Mentored over 20 underrepresented students in the REBLS leadership program
- **HackHer413 Founder:** Founded the first first all-female and non-binary student hackathon in Western Massachusetts (Jan - May 2019)