

Drew Johnston

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Education

MS, Mathematics

December 2022

Brigham Young University

Provo, Utah

- GPA: 4.00, GRE: 170 Verbal Reasoning (99th Percentile), 168 Quantitative Reasoning (92nd Percentile)
- Relevant Coursework:
 - Modeling with Data and Uncertainty
 - Modeling with Dynamics and Control
 - Advanced Computer Vision
 - Advanced Deep Learning
 - Natural Language Processing
 - Algorithms, Approximation and Optimization

BS, Applied & Computational Mathematics (ACME)

December 2020

Brigham Young University

Provo, Utah

- Concentration: Machine Learning
- GPA: 4.00, National Merit Scholar, Member of Phi Kappa Phi National Honor Society

Skills

- Predictive Modeling, Data Mining, Data Cleaning, Data Munging, Research, Web Crawling, Reading Documentation, Receiving Criticism, Presentation, Communication, Collaboration, Organization
- *Coding*: Python, R, C++, Apache Spark, SQL, NoSQL, MongoDB, Prolog, Jupyter, Git
- *Python Modules*: NumPy, SciPy, scikit-learn, Matplotlib, Pandas, PyTorch, BeautifulSoup, Requests, NLTK

Experience

Data Science R&D Graduate Intern

May 2020– August 2021

Sandia National Laboratories—Cybersecurity Division

Albuquerque, NM

- Designed and validated Graph Neural Network architecture for automated malicious event detection. The model performed on par with industry standards as measured by F1-score across four relevant (undisclosed) datasets.
- Spearheaded a project to implement significant UI changes to facilitate model explainability in the Incident Response pipeline for the cybersecurity team.
 - These changes were developed through iterative research, prototyping and surveyance, and they remain in deployment on a national scale.

Data Scientist

May 2020 – November 2020

Brigham Young University—Enrollment Services

Provo, UT

- Coordinated with a small team of data scientists to statistically identify and evaluate metrics for student success within a major. We leveraged techniques from graph theory, clustering, and classification models to determine optimal paths of success for university students based on their major and prior data. This provided ample opportunity for collaborative work as well as individual research and experimentation with a variety of statistical learning methods.
- Participated in daily reporting and brainstorming sessions to establish project direction and solve problems.
- Presented results and ideas for future work to a team of executives within Enrollment Services.

Undergraduate Researcher

June 2019 – August 2019

University of North Carolina at Wilmington—Department of Mathematics and Statistics

Wilmington, NC

- Selected as one of 8 students to join a summer Research Experience for Undergraduates program in collaboration with the National Science Foundation and Professors Cuixian Chen and Yishi Wang.
- Developed novel features for detecting atrial fibrillation in electrocardiogram readings.
- Achieved 97% detection accuracy using a random forest model with personally engineered features.
- Composed a [paper](#) detailing my methodology and results under the direction and advisement of Dr. Yishi Wang.
- Presented my results in research conferences at UNCW, UNCG, and Clemson University.

Projects

To read about my latest projects as well as my papers and project reports, please visit my personal website:

<https://drewjohnston13.github.io/>