# Dylan Skinner

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## EDUCATION

**Bachelor of Science: Applied and Computational Mathematics Emphasis**                    **Apr 2024**
*Brigham Young University*                                                                                          *Provo, UT*
Concentration: Data Science and Machine Learning
GPA 3.99, Member of BYU Honors Program

## SKILLS

**Senior Year Skills**
- Machine learning, neural networks, hidden Markov models, state-space models, Kalman filter, ARIMA models, sampling (MCMC), mathematical statistics, Bayesian modeling, modeling with differential equations, numerical methods for differential equations, dynamical systems, optimal control

**Programming Languages/Software**
- Python (PyTorch, NumPy, Pandas, Matplotlib, Scikit-Learn), R, Tableau, C++, SQL, Unix, Git, Bash, Amazon Web Services (Athena, SageMaker, S3)

**Relevant Coursework**
- Linear and Nonlinear Analysis, Computation and Optimization, Deep Learning, Multivariable Calculus

## EXPERIENCE

**Data Science Intern**                                                                                      **May 2023-Aug 2023**
*Harbor Health*                                                                                                        *Austin, TX*
- Implemented LLMs for data pairing, resulting in algorithm increasing accuracy by 58%
- Used AWS Athena and SageMaker to create 128 data clusters, improving assignment accuracy by 45%
- Created a time-series model to dynamically group medical appointment data
- Gained in-depth knowledge of medical codes (HCPCS, DDC, GPI, CPT, ICD-10)

**Mathematics Research Assistant**                                                                     **April 2021-Present**
*Brigham Young University, Dr. Mark Hughes*                                                              *Provo, UT*
- Conduct research for 20+ hours a week in knot theory, 4D topology, and machine learning
- Designed and implemented a highly-efficient reinforcement learning algorithm using PPO, resulting in a four-fold increase in learning speeds
- Collaborate with a global network of researchers to develop successful predictive models in 4D topology

**R Programming Teaching Assistant**                                                        **August 2022-December 2022**
*Brigham Young University*                                                                                          *Provo, UT*
- Assisted professor for 5+ hours a week in teaching data visualization and statistical programming in R
- Facilitated office hours to help 12+ students solve real-world statistical problems in R

## VOLUNTEER EXPERIENCE

**Volunteer Representative**                                                                                 **April 2021-Present**
*Fresh Start Ventures*                                                                                                *Provo, UT*
- Attend and facilitate weekly meetings for groups of 13+ recently released prison inmates
- Coach recently released prison inmates for 3 hours a week on their goals and help them develop plans

**Full-time Volunteer Representative**                                                             **July 2017-July 2019**
*The Church of Jesus Christ of Latter-day Saints*                                                     *Reno, NV*
- Planned, organized, and conducted trainings and conferences of 160+ missionaries
- Labored 80+ hours a week to serve and teach a variety of people in Nevada by making and following plans
- Contributed to 40+ leadership councils with local leaders

## SCHOLARSHIPS AND AWARDS
- Full Tuition Academic Scholarship 2019-2023
- School of Physical and Mathematical Sciences Dean's List: 2019-2022