

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), Docker

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

- Collaborated with a cross-functional team to implement LLMs for data pairing, resulting in a 58% increase in algorithm accuracy and enhancing team productivity
- Built and maintained 128 data clusters using AWS Athena and SageMaker, improving assignment accuracy by 45%
- Developed a medical expense model using Python and SQL, reducing expenses by 15% and saving the company \$7.5 million annually
- Optimized SQL queries, resulting in 2x increased speed
- Gained in-depth knowledge of medical codes (HCPCS, DDC, GPI, CPT, ICD-10) and utilized Matplotlib for visualizing complex data sets, facilitating better decision-making

Mathematics Research Assistant

April 2021-Present

Brigham Young University, Dr. Mark Hughes

Provo, UT

- Conducts research for 20+ hours a week in knot theory, 4D topology, and machine learning
- Implemented a highly efficient reinforcement learning algorithm using Proximal Policy Optimization (PPO), which quadrupled learning speeds and increased predictive accuracy by 116%
- Collaborates with a global network of researchers to develop successful predictive models in 4D topology
- Successfully defended and published undergraduate thesis in 4D topology and deep reinforcement learning

R Programming Teaching Assistant

August 2022-December 2022

Brigham Young University

Provo, UT

- Collaborated with the teaching team to support and enhance the learning experience of 12+ students in data visualization and statistical programming using R

VOLUNTEER EXPERIENCE

Volunteer Representative

April 2021-August 2023

Fresh Start Ventures

Provo, UT

- Attended and facilitated weekly meetings for groups of 13+ recently released prison inmates

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