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Spencer Wilson

Data Scientist / Software Engineer

github.com/spencer-scw
linkedin.com/in/spencer-scw

Skills

Languages	Python (NumPy, Pandas, PyTorch, and TensorFlow), R, SQL, JS/TS, Java, C++
Tech Stack	CUDA, Docker, Git, Bash, Linux, Jupyter Notebook, Quarto, Vim, Grafana

Technical Experience

Data Analyst **June 2025 — Present**
DAF Research Collaborative *Remote*

- Cleaned, structured, and analyzed large-scale datasets using R to detect patterns of recurring and repeat giving.
- Generated visualizations of the data and collaborated with the research team to interpret findings.

Computer Technician **Aug 2023 — May 2025**
BYU Statistics *Provo, Utah*

- Managed our cluster of IT infrastructure (20 Linux servers in a local server room, 3 switches).
- Diagnosed issues with faculty members' ML and statistics codebases and contributed to their development.
- Modernized our tech stack; replaced Apache2 with nginx and docker for all of our deployment.
- Implemented full-stack systems monitoring and reporting, including a custom web app dashboard written in NextJS with a Prometheus backend as well as a Grafana dashboard.
- Built and maintained internal and external websites for faculty and students.
- Created a lightweight Docker environment for students to use in a university class on Linux.

Media Production Specialist **Jan 2021 — Sep 2023**
BYU Studies *Provo, Utah*

- Edited and produced video interviews with BYU faculty.
- Designed, edited, and produced audio recordings for the a campus journal.
- Reviewed scripts, managed audio equipment, and created publication-ready content.

Education

B.S. Statistics: Data Science, ***Brigham Young University*** **Sep 2020 — Apr 2025**
Minor in Computer Science

Relevant Coursework:

Deep Learning

- Used Pytorch to design, train, and deploy fundamental and landmark deep learning architectures such as CNN, ResNet, Adversarial, and Attention models, as well as implementing individual components like optimizers.
- Self-directed a comprehensive final project that used a ResNet to analyze Google Earth Engine imagery of mountainous snowpack to predict depth.

Analysis of Correlated Data

- Fundamental usage of linear modeling in situations with data correlation, like time series analysis, spatial correlation, blocked studies, and longitudinal studies.
- Final project was an analysis of heat-related illness in Houston using a spatial model to make public health reccomendations.

Machine Learning

- Overview of many popular methods of machine learning including Random Forests, SVMs, XGBoost models, Neural Networks, and Reinforcement learning.
- Used Scikit-Learn and TensorFlow to implement and train the models.

Algorithm Design and Analysis

- General approaches to algorithm design: Divide and Conquer, Graph, Greedy, DP, LP, and Intelligent Search.
- Projects included the Traveling Salesperson problem, RSA encryption, Convex Hulls and network routing.

Activities

- Section leader and tuba player in the BYU Marching Band and BYU Pep Band for 3 years.
- Presented in the BYU Student Research Conference on my research and literature review on using machine learning and satelite imagery to predict mountain snowpack.
- Served a Spanish-speaking mission for the Church of Jesus Christ of Latter-day Saints in Anchorage, Alaska and Cordoba, Argentina (2021-2023).
- Hobbyist video game designer participating in game jams with a focus on networked party games using websockets.