Tyler Binning

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Education

Bachelor of Science in Data Science Sept. 2022 - April 2025
Brigham Young University-Idaho Rexburg, ID

- Vice President, Data Science Society
- Courses: Data Visualization, Database Design & Development, Applied Linear Regression

Skills

Machine Learning: Scikit-learn, XGBoost, TensorFlow, PyTorch

Statistical Models: Linear Regression, Logistic Regression, ANOVA, T- tests, ARIMA, SARIMA

Data Visualization: PowerBI, Ggplot, Plotly, Streamlit, Dash, Matplotlib, Tableau

Programming Languages: Python, R, SQL

Data Engineering & Big Data Tools: MySQL, SQL Server Management Studio, PySpark, Databricks, Docker, Google Cloud, AWS

Soft Skills: Communication, Problem-Solving, Adaptability, Team Collaboration

Professional Experience

Artificial Intelligence Engineering Consultant Jan. 2025 – Apr. 2025
Statistics & Data Science Consulting | *Brigham Young University – Idaho* Rexburg, ID

- **Collaborated** within a team to **design and develop** an AI-powered Teaching Assistant, integrating **generative AI** to provide course guidance and answer student questions.
- **Integrated** course materials into the AI Teaching Assistant using a Retrieval-Augmented Generation (**RAG**) model, ensuring accurate, context-aware responses to enhance student learning.
- **Worked with faculty** to refine **AI-generated insights**, ensuring alignment with academic standards and improving instructional effectiveness.

Experiential Learning Projects

Algorithmic Trading Platform Jan. 2025 – Apr. 2025
Senior Capstone Project | *Brigham Young University – Idaho* Rexburg, ID

- **Designed** a solution to automate trading decisions by researching **quantitative techniques** and **implementing multiple back testing frameworks** to validate strategies.
- **Centralizing** back testing performance metrics in a database to enable systematic evaluation and refinement of trading approaches.
- **Architecting** a machine learning-driven portfolio manager for optimized asset allocation and developing a **Dash-based dashboard to visualize real-time performance.**
- **Planned and prepared** the deployment of AWS for scalable, real-time operations to enhance system performance and reliability.

Medical Imaging Convolutional Network Jan. 2025 – Apr. 2025
Data Science Society | *Brigham Young University – Idaho* Rexburg, ID

- **Developed** a convolutional neural network (**CNN**) to classify **elbow muscle tissue** in MRI scans, identifying potential injuries and assessing the risk of immobility.
- **Implemented** image recognition techniques to distinguish between different tissue types and detect abnormalities for improved injury assessment.