**JACOB BROWN**

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**EDUCATION**

**Bachelor of Physical Science – Data Science**

*Brigham Young University Idaho* *Graduation: 2025*

**Data Science Society**

* Vice President
* Project Lead

**SKILLS**

**Data Management & Organization:**

* **Python:** PySpark, SQLite, Pandas, Polars, Docker
* **R:** dplyr, tidyr, stringr, Tidyverse
* **Cloud:** AWS, Google Cloud, Vertex AI, Streamlit Cloud, Data Bricks, Azure **Data Visualization & Cleaning:**
* Power BI, Excel, Tableau, Lets-Plot, Plotly, GGPlot, HTML **Machine Learning:**
* **Python:** Scikit-Learn, Neural Networks, XGBoost, Random Forests, Decision Trees

**WORK EXPERIENCE:**

**AI Tutor Bot Project Lead & Consultant –** *BYU-Idaho Jan 2025 — Present*

* Improved student learning outcomes across multiple courses by developing AI-driven tutoring solutions.
* Directed cross-functional front-end and back-end teams to deliver a seamless, interactive student-AI engagement platform.

**SQL Teaching Assistant –** *BYU-Idaho* *Sep 2024 — Dec 2024*

* Taught SQL concepts such as relational database design, JOINs, UNIONs, and subqueries to undergraduate students.
* Supported 400+ students on Python and R projects involving Pandas, Scikit-learn, and data visualization tools.

**Data Science Tutor –** *BYU-Idaho* *Sep 2024 — Dec 2024*

* Guided students through Python and R projects using Pandas, Scikit-learn, ggplot2, and Lets-Plot.
* Managed daily operations of a high-traffic tutoring center supporting 400+ students across campus.

**PROJECT EXPERIENCE:**

**Machine Learning Model, MRI Image Recognition (CNN** *Jan 2025 — Present*

* Developing a convolutional neural network (CNN) to analyze MRI scans and predict post-traumatic joint conditions (PTJC), aiming to improve diagnostic accuracy through unsupervised learning.
* Preprocessing and augmenting medical imaging datasets using Polars and Pandas to enhance model reliability and reduce false positives.

**Machine Learning Model, Facial Recognition (CNN** *Jan 2025 — Present*

* Designed and implemented a CNN achieving 80% accuracy in facial recognition across diverse lighting conditions and angles.
* Optimized a data pipeline with Pandas and Polars for efficient preprocessing of 1,700 images; utilized Scikit-learn for targeted augmentation.

**Relational Data Base Creation, LindaBrownPottery** *Apr 2024 — Dec 2024*

* Designed and implemented a SQL-based inventory management system, improving product tracking and operational efficiency.
* Created a dynamic Excel dashboard with VBA automation to visualize sales trends, forecast profitability, and inform strategic decisions.

**Statistical Analysis of IBC, Project Lead** *Apr 2024 — Jul 2024*

* Led a team of four analysts in identifying optimal business locations using advanced statistical techniques in R and Python, driving significant projected revenue growth.
* Built predictive models to recommend efficient team configurations, reducing operational costs while maintaining productivity levels.