David J. Hansen

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SKILLS

- Programming & Tools: Python (Pandas, Scikit-learn, PySpark, Polars), R, SQL, Git/GitHub, Databricks, Streamlit, Excel, Snowflake, Airflow.
- Data Science & Analytics: Machine Learning, NLP, Data Wrangling, Predictive Modeling, Feature Engineering, Data Visualization, Data Pipelines, Data Warehousing.
- Soft Skills: Critical Thinking, Personal Communication, Mentoring, Problem Solving, Attention to Detail.

EXPERIENCE

Technical Project Manager September 2025 - December 2025

BYU-Idaho *Rexburg, ID*

- Managed a 4-member student team by defining project requirements, running weekly sprints, assigning tasks, and ensuring timely delivery of analysis and site testing for Dewey Data.
- Conducted year-over-year time-series analysis using Python and Polars to reveal seasonal patterns, normalize weekday alignment, and detect outliers in consumer spending data.
- Delivered customer facing documentation for using the Dewey Data platform with an example analysis.

Math Tutor 2020 - Present

Private Tutor, Mathnasium, BYU-I Mathlab, Teaching Assistant *Rexburg, ID*

- Tutored high school, college, and elementary students in algebra, calculus, and statistics.
- Developed personalized learning plans and provided virtual/in-person tutoring, including supporting one student in earning a GED.
- Taught diverse learners with a strong focus on building foundational and advanced math skills.

ACADEMIC PROJECTS

Automated Data Warehouse September 2025

- Built automated ingestion pipelines in Apache Airflow 3.0 (Docker) to extract, clean, and load weather, stock and news data into Snowflake on both daily and historical backfill schedules.
- Created RAW and MODELED schemas in Snowflake and implemented efficient UPSERT workflows using MERGE, write_pandas, and staging tables for scalable data loading.
- Developed an interactive Streamlit app deployed in Snowflake to visualize weather and stock trends, and on-demand KPI generation for final project deliverable.

Political Science Email Database July 2025

- Built a Data pipeline to generate and verify email addresses for government employees from scraped names.
- Applied Python, Polars, and SMTP protocols to test and filter out invalid records, and spam-blocked domains.
- Optimized search space from 45M+ potential emails to ~100k by designing a sampling strategy of 50 employees per domain.

Clone Hero Auto Charter July 2025

- Designed a custom pipeline to align audio data with chart files and feed into a Transformer model for guitar note prediction.
- Implemented preprocessing with Python, Librosa, Polars, and PyTorch; trained locally with NVIDIA tools.
- Trained on ~1,000 songs, achieving baseline predictions on unseen charts while identifying optimization needs for accuracy.

EDUCATION

Bachelors of Science in Data Science December 2025

Brigham Young University - Idaho *Rexburg, ID*

Minor in Mathematics.