Matthew Haddad

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SKILLS

Technical Skills: Proficient in Excel, Python, SQL, R, LaTeX, and Microsoft Office suite. Strong foundation in Tableau and Power BI dashboard creation, data manipulation and data analysis.

Statistical and Machine Learning: Statistical & Predictive Modeling: Developed and applied machine learning and statistical models to generate actionable insights from KPI monitoring, presented through dashboards in Tableau and Power BI.

Interpersonal Communication: Proven ability to lead and schedule a 4 person cross-functional team using Python and public data sets to analyze world energy consumption and investment, communicating through Github and Microsoft Teams.

Quantitative Skills: Multivariate analysis, regression, and descriptive statistics were used to execute robust experiments, ensure data quality, and facilitate clear interpretation of chemical testing results.

EDUCATION

University of Calgary   Calgary, AB
Master's of Data Science and Analytics   *Jan. 2024 – Ongoing*

Mount Royal University   Calgary, AB
Bachelor of Science, Chemistry   *Sept. 2019 – May 2023*
- Extensive experience in Excel for data analysis, utilizing advanced functions and fundamental concepts in VBA for efficient implementation

PROJECTS

Energy Trends: Financing, Production & Renewables | *Python, SQL, Git*   March 2024
- Investigated global trends in renewable energy financing, production, and technologies using datasets from IRENA, OECD, and World Bank spanning 2000-2021.
- Applied SQL and Python to clean, merge, and query complex datasets, creating visualizations that highlighted capacity growth, technology shifts, and regional disparities.
- Identified dominant technologies like hydropower, emerging trends in wind and solar, and provided insights into the correlation between investments and capacity expansion, aiding strategic energy decisions.

Visualization and Analytics on Various Datasets | *Tableau, Power BI, Python, Microsoft Teams*   March 2024
- Prepared, cleaned, and visualized data using Tableau and Power BI, delivering actionable insights to diverse teams.
- Conducted weekly exploratory data analysis, adapting to dynamic team compositions and tight deadlines.
- Enhanced visualization capabilities by implementing Python within Power BI for advanced analytics.

Walmart Sales Analysis: Multiple Linear Regression | *NumPy, R, LaTeX*   April 2024
- Employed multiple linear regression using NumPy and R to analyze the impact of economic and local factors on Walmart sales performance in the US.
- Leveraged LaTeX to create a report effectively communicating the multi-linear regression model to colleagues and supervisors, achieving a perfect project score.

Machine Learning In Geothermometry Mapping | *Python, PCA, VCM, Clustering*   July 2024
- Cleaned and preprocessed geothermal water sample data, handling missing values and feature selection which enhanced dataset quality.
- Detected ionic composition outliers using One-Class Support Vector Machine and Principle Component Analysis, supporting operational insights for geothermal wells.
- Applied K-means clustering to identify patterns in dissolved constituents and developed Support Vector Machine models for classifying water sources using python library Scikit-learn.

AWS Data Pipeline Development | *Python, AWS EC2, S3, Streamlit, Unix*   August 2024
- Designed and implemented a data pipeline on AWS, leveraging EC2 and S3 for efficient data storage and retrieval of video game data in a Unix-based system.
- Built an interactive Streamlit dashboard to visualize individual match data, creating detailed visuals for analysis and performance insights.

Work Experience

Research Assistant July 2020 – May 2023
Mount Royal University *Calgary, AB*
- Streamlined the process of entering data required for computational chemistry calculations, enhancing efficiency and reducing potential errors.
- Implemented Python scripts to efficiently retrieve and iterate through specific data points within program (ORCA) output files, facilitating further analysis.
- Created Python scripts to produce informative surface and contour plots of extracted data, enabling a deeper understanding of the results.

Conference Presentations

Western Canadian Undergraduate Chemistry Conference May 2023
University of Alberta *Edmonton, AB*
- Communicated complex model-driven insights of relativistic effects on dipole interactions to diverse audiences.

Mount Royal Faculty of Science Research Day March 2023
Mount Royal University *Calgary, AB*
- Translated complex, high-dimensional chemical models into clear, data-driven narratives.

Volunteering and Leadership

Learning Peer September 2022–April 2023
Mount Royal University Peer Learning Program *Calgary, AB*
- Supporting university students in science and math.
- Lead personalized learning experiences for teams up to 5, promoting effective skill development.
- Create learning plans weekly utilizing varied practice methods such as KWL charts, 3:2:1 reflections etc.

Student Aid Volunteer September 2023–Ongoing
Calgary Catholic School District *Calgary, AB*
- Helping elementary children, 1 on 1 and in groups, with reading, writing, and computer literacy