# JOSHUA QUARTEY

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## RELEVANT SKILLS

- Graduate Data Science student with hands-on experience supporting research and business analytics projects through data cleaning, predictive modeling, and visualization.
- Experienced in building predictive models, cleaning and transformation, and extracting actionable insights from large, complex datasets.
- Committed to delivering high-quality, client-focused solutions through clear documentation, effective communication, and collaborative teamwork.
- Applied practical knowledge of hypothesis testing, correlation, and time-series analysis across real-world projects using tools like pandas, seaborn, MariaDB, SQLAlchemy, TensorFlow, and PyTorch.

## EDUCATION

**Master of Data Science and Analytics, Data Science** **Jan 2025 – Present**

University of Calgary, Alberta

- Enrolled in Science Internship Program
- Highlighted courses: Working with Data at Scale, Statistical Modelling with Data, Visualizations, Statistical Data Analysis

**Bachelor of Science, Computer Science** **Aug 2018 – May 2023**

Ashesi University, Ghana

- Dean's List Spring 2019 and Fall 2022; GPA 3.04/4.00
- Highlighted courses: Data Science, Computer Vision, Algorithm Design, Software Engineering, Statistics, Calculus, Data Structures, Database Systems

## RELATED PROJECTS

**Aircraft Price Prediction with Multiple Linear Regression** **Mar 2025 – Apr 2025**

Group Project | R, R Markdown

- Developed a predictive model using multiple linear regression with two-way interaction terms to estimate aircraft prices.
- Validated regression assumptions and evaluated model generalization on a test set which Improved price prediction accuracy and minimized overfitting.
- Communicated technical methodology and key findings clearly in a formal R Markdown report for the team's project defense

**Alberta Industry and Labor Force Trends Analysis** **Mar 2025 – Apr 2025**

Group Project | MariaDB, SQL, Python(pandas, Numpy, Seaborn, SQLAlchemy)

- Conducted end-to-end analysis on four datasets (2001–2022) covering Alberta's economic and labor trends to uncover industry-specific GDP growth patterns and the impact of COVID-19.
- Standardized and cleaned GDP data using regex in SQL, reducing inconsistencies and enabling more accurate trend analysis across industries.
- Created visualizations(bar charts, heatmaps) highlighting key labor force changes during the pandemic, enhancing strategic understanding of economic shifts.
- Introduced basic data governance practices, including creating a data dictionary, and collaborated on data quality assurance by centralizing database access through a virtual machine, which improved project data quality and version control across team members.

**Limited-Data GAN Training for African Print Design Generation** **Nov 2022 – Dec 2022**

Independent Project | Python (TensorFlow, PyTorch)

- Trained GANs (DCGAN, WGAN) using convolutional neural networks to generate realistic African fabric patterns from a small dataset (<1000 entries), addressing data scarcity challenges in generative AI domains.
- Enhanced model performance by applying transfer learning techniques, achieving improved Inception Scores and Frechet Inception Distances compared to baseline models.
- Conducted ablation studies to evaluate GAN architectures and domain adaptation methods, identifying the optimal training setup for limited-data environments.

## EMPLOYMENT EXPERIENCE

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**IT Intern** **Nov 2022 – Nov 2023**

Dodowa Health Research Centre, Accra, Ghana

- Facilitated fieldworker training sessions for 8 to 12 field workers to ensure consistent data collection practices for a maternal health education research project.
- Cleaned and pre-processed a research team’s survey data to support the creation of a poster presentation, enhancing the team’s ability to communicate findings effectively at an academic forum.
- Streamlined institutional records management by applying Excel formulas and filters, reducing manual error checking time and improving record accuracy.