

Katsuma Onishi

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Summary

Mathematics and Statistics graduate from McMaster University with experience in data analysis, modeling, and visualization. I worked as a Research Data Analyst at the National Institute for Materials Science in Tsukuba, Japan and as an Inventory Data Analyst at a computer refurbishing company in Markham, Ontario. Comfortable working with Python, R, SQL, and Tableau across both research and industry settings.

Education

McMaster University — B.Sc. Mathematics and Statistics

Sept 2021 — Aug 2025

Programming: R, RStudio, Python, SQL, Excel, Tableau, Markdown

Experience

Research Data Analyst

Jan 2026 — June 2026

National Institute for Materials Science (Tsukuba, Japan)

Tools: Python, WSL, Docker, Azure

- Built 4 data templates converting raw laboratory instrument outputs into standardized datasets, enabling self-service data sharing across 4 research groups
- Modified and improved existing templates to meet evolving researcher requirements for data structure, preprocessing, and visualization
- Troubleshoot data and template errors on active researcher projects and onboarded new users to the RDE data platform

Inventory Data Analyst

Sept 2020 — Aug 2024

Advanced Skytech Canada (Markham, ON)

Full-Time (2020–2021), Seasonal (2021–2024)

Tools: Excel, Python, Tableau

- Tracked inventory levels for ~40 SKUs across 10 hard drive models to maintain accurate stock records across multiple production lines
- Built Tableau dashboards from scratch to visualize inventory trends for sales and warehouse teams
- Used Excel and Python for data cleaning and analysis to support day-to-day inventory decisions

Projects

Used Car Price Prediction Model (R/RStudio/HTML)

March 2025

- Built a linear regression model on 100,000+ Craigslist listings to predict used car prices, achieving an R^2 of 0.691 and MAE of ~\$3,781
- Performed data cleaning, outlier removal, and correlation analysis to identify odometer and vehicle age as the strongest price predictors
- Validated model on real listings from Autotrader, achieving 11–13% error on common vehicles like the Toyota Corolla and RAV4

Carbon Cycle & Sustainable Deforestation Model (R/RStudio)

Jan 2025

- Developed a dynamic systems model to analyze deforestation impact on carbon storage across an ecosystem with seasonal climate variations
- Authored a technical report detailing methodology, R simulations, and key findings
- Delivered a presentation to a lecture hall, simplifying complex systems into insights using data visualization

DSA (Dual System Algorithm) Cryptosystem (Python/Markdown)

Dec 2024

- Designed a hybrid cryptosystem combining the Chinese Remainder Theorem and RSA principles
- Demonstrated system vulnerabilities through cryptanalysis of public key exposure
- Published with Markdown using simple encryption/decryption examples

Skills

Data & Analysis: Python, R, SQL, Excel, Tableau

Infrastructure: Docker, WSL, Azure

Other: RStudio, Markdown