

Daniel Dema

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EDUCATION

York University

Master of Arts in Data Science

Sep. 2024 – Dec. 2026 (Expected)

University of Toronto

Honours Bachelor of Science in Mathematics

Sep. 2019 – Apr. 2024

EXPERIENCE

Freelance Data Engineer

May 2025 – Present

Superior Audio | Skills: SQL, PostgreSQL, Supabase, Retool, Python, pandas

- Replaced fragmented Google Sheets with a centralized **PostgreSQL** database via **Supabase**, saving the business owner **10+ hours/week** on manual data entry and reducing data entry errors by **37%**
- Developed and deployed a custom **CRUD** web and mobile app in **Retool** using optimized **SQL** queries, enabling staff to input sales, update inventory, and upload product images daily
- Built an interactive dashboard with **15+ real-time data views**, including sales trends, stock alerts, and top-selling products, driving data-informed decisions and contributing to a **47% profit growth** in Q2 2025 vs. Q1 2025

Teaching Assistant

Sep. 2021 – Present

University of Toronto & York University

- Taught 13+ distinct mathematics courses, including Real Analysis, Calculus I & II, Linear Algebra I & II
- Led weekly tutorials of 40+ students and supported lecture sections with 100+ students; graded coursework for 4500+ students across 12+ semesters at two universities

PROJECTS

Pediatric Appendicitis Prediction System

Skills: Python, scikit-learn, pandas, Flask, HTML/CSS, Docker, Microsoft Azure, Git

- Developed and optimized a Random Forest model using **scikit-learn**, applying cross-validation to achieve **97% accuracy** with a low **3% false negative rate** for appendicitis diagnosis based on symptoms and clinical signs
- Built an interactive **HTML/CSS** front end for symptom input, linked to a **Flask** backend for real-time predictions; containerized the app with **Docker** and deployed it on **Microsoft Azure**

Alzheimer's Cognitive Trajectory Modeling

Skills: R, RStudio, Git

- Modeled cognitive decline trajectories from **350+** longitudinal observations using mixed-effects spline models in R; improved model fit (conditional **R² from 0.73 to 0.82**)
- Found that socioeconomic status boosts baseline cognition but is linked to faster decline over time through significant interactions with age and brain volume (**p-values < 0.002**)

TECHNICAL SKILLS

Languages: Python, SQL, R, HTML/CSS

Libraries & Frameworks: scikit-learn, pandas, NumPy, Matplotlib, Flask, XGBoost

Tools & Platforms: Git, Docker, Jupyter Notebook, VS Code, RStudio, Microsoft Excel, LaTeX

Databases & Cloud: PostgreSQL, Supabase, Microsoft Azure, Retool