David Olejniczak

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Fluent in English and Polish

Education

Bachelor of Software Engineering from McMaster University *Expected May 2027*

- Awarded the McMaster Engineering Award of Excellence

Work History

Engineering Associate | Ontario Ministry of Transportation – Engineering Materials Office *Jan 2025 – Present*

- Automated repetitive tasks and accelerated report generation by building Python based automation frameworks in collaboration with engineers to gather requirements, analyze trade offs, create data pipelines and achieve the Engineering Materials Office's automation and efficiency goals.
- Influenced materials selection for provincial highway projects by analyzing large datasets in Jupyter Notebooks with Panads, NumPy, and scikit-learn, producing statistical summaries and visualizations that directly supported the publication of official technical documents.
- Improved query performance and streamlined data retrieval for engineering work by designing and implementing optimized MS Access (SQL) database schemas for historical test results and contractor data, reducing query runtime by 60%.
- Presented AI and automation workshops to MTO engineers and managers, explaining machine learning fundamentals, outlining benefits and limitations, clarifying legal and compliance requirements for government use, and identifying practical applications across departments.
- Updated Ontario Provincial Standard Specification guidelines by conducting tests and evaluating new material requirements, authoring a technical report and presentation, and chairing meetings with MTO branch managers to drive the adoption of updated standards.

Projects

Lego Price Predictor

- Evaluated the risk and viability of Lego sets as assets by engineering a Python data driven investment tool using Google Cloud Platform (GCP) that scrapes pricing data from multiple marketplaces to forecast ROI.
- Developed an alert system using Selenium, Auth0 and the Google Sheets API, providing an easy way to monitor prices and empower quick, informed buying decisions.

Strava Race File Finder

- Eliminated time consuming manual Strava searches by building a full stack Java Spring Boot and PostgreSQL web application, deployed on Heroku, enabling cyclists to quickly find and access professional riders' Strava files.
- Implemented a responsive Node.js, React, TypeScript frontend hosted on Vercel, reducing average search time and improving user satisfaction.

Fast Grubbs Test

- Built a high-performance Python package with a C++ core via CMake, reducing Grubbs' Test runtime on large datasets, and attracting over 100 monthly PyPI downloads.

Skills

Competencies: Quantitative Analysis, Data Management, Strategic Research, Stakeholder Presentation
Programming Languages: Python, Java, C++, C, SQL, HTML, CSS, Bash, PowerShell, JavaScript / TypeScript
Technologies: Microsoft Office Suite, Spring Boot, Node.js, Heroku, Vercel, React, IBM DB2, CMake, Docker, Git, GitHub
Databases: PostgreSQL, Microsoft Access,DB2, SQLite

Personal Interests

- Former professional road and track cyclist; three-time national champion and Canada Summer Games gold medalist.
- Volunteer weekly teaching children in the Toronto Polish community.