

JOSHUA DESGAGNÉS

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EDUCATION

BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

Advanced Diploma

Burnaby, British Columbia
May 2025

- Geographic Information Systems (GIS)
<https://joshdesgagnes.github.io/gisportfolio/>

UNIVERSITY OF MANITOBA – ASPER SCHOOL OF BUSINESS

Bachelor of Commerce (Honours)

Winnipeg, Manitoba
Apr 2022

- **Majors:** Accounting, Management Information Systems (MIS)

TECHNICAL SKILLS & LANGUAGES

- **Programming:** Competent in SQL and Python (Pandas, SQLAlchemy); Working knowledge of HTML/CSS, JavaScript, and PHP.
- **Databases & Infrastructure:** Proficient in PostgreSQL/PostGIS; Competent in Azure SQL Database, Docker, DBeaver, FME Form (ETL), and FME Flow; Academic exposure to Oracle 19c and Microsoft SQL Server 2017.
- **Analytics & Visualization:** Proficient in ArcGIS Pro, ArcGIS Dashboards, and QGIS; Working knowledge of Apache Superset; Academic exposure to Tableau, Power BI and R.
- **Tools & Productivity:** Proficient in Microsoft Office (Excel, Word, Outlook, PowerPoint); Competent in Git/GitHub.
- **Languages:** Native proficiency in English and French.

WORK EXPERIENCE

CHRIS WERNER CONSULTING INC.

Data & GIS Specialist

Winnipeg, Manitoba
Oct 2025 – Present

- Designing and implementing a centralized multi-schema PostgreSQL/PostGIS database consolidating operational and geospatial data across thematic domains, replacing legacy file-based systems with role-based security and trigger-based audit logging.
- Building Python ETL pipelines using SQLAlchemy and Pandas to extract, validate, and load data from Excel, CSV, and legacy sources into PostgreSQL.
- Developing SQL-driven web applications with SQLPage to replace Microsoft Access forms, delivering browser-based data entry, reporting, and ad hoc querying for a First Nations membership registry.
- Deploying and administering a containerized data services stack (Docker) for web applications and GIS portal (GeoNode, GeoServer, MapStore2, Django), enabling web-based map publishing, metadata management, and secure data sharing.
- Authoring a comprehensive data infrastructure technical proposal covering database architecture, data governance, migration strategy, and modern, scalable technology evaluation.

RENTAL PROTECTION FUND

Geospatial Database Developer Intern

Vancouver, British Columbia
Apr 2025 – May 2025

- Led the design and implementation of a relational database in Microsoft Azure SQL Database using DBeaver, defining schemas, constraints, and views to integrate housing and applicant datasets.
- Built automated ETL pipelines with FME Form to ingest, validate, and load data from multiple sources into Azure SQL Database.
- Deployed interactive dashboards using Apache Superset for ad hoc querying and operational reporting.
- Translated business requirements into technical specifications, troubleshoot data inconsistencies, and communicated workflows to non-technical stakeholders.

BOOKE & PARTNERS

Staff Accountant

Winnipeg, Manitoba
Jan 2023 – Aug 2024

- Analyzed complex financial datasets and prepared hundreds of financial statements and tax returns for individuals, corporations, and trusts using Excel, ensuring accuracy, compliance, and strict confidentiality.
- Reconciled client accounts at year-end, performing data validation and preparing adjusting entries to resolve discrepancies across various accounts.
- Managed multiple concurrent projects under demanding deadlines, communicating complex financial information clearly to clients and team members.

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ACADEMIC PROJECTS

INCIDENT REPORTING WEB APPLICATION

Apr 2025

<https://github.com/joshdesgagnes/experience-builder-app>

- Developed a full-stack web application using React, TypeScript, and ArcGIS Maps SDK for JavaScript, featuring data entry forms with validation and real-time synchronization of submitted records.
- Designed modular, reusable components supporting interactive map visualization, keyword-based filtering, and dynamic reporting of user-submitted data.

INFORMATION SYSTEMS STRATEGY

Apr 2022

- Conducted an analysis of a major Canadian transportation company's information systems, collaborating with the VP of Network Analytics & Development to produce a strategic proposal addressing technology constraints and business alignment.
- Assessed existing systems against operational requirements, identifying gaps and producing recommendations to support a planned strategic expansion.

CHESS DATABASE

Dec 2021

- Designed and built a relational database to store, query, and analyze collections of chess games for player preparation.
- Processed and transformed data from thousands of Portable Game Notation (PGN) files using Python (Pandas), performing data cleaning, normalization, and loading into structured tables for analytical querying.
- Created a GUI in MS Access for data retrieval and analysis (e.g., win percentages, move orders, variation frequency), demonstrating end-to-end data pipeline and reporting capabilities.