

William O'Higgins Witterman

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Profile

Data scientist and programmer-librarian with 20+ years of experience at the intersection of research, healthcare, and complex technology. Proven ability to design and implement data pipelines, lead cross-disciplinary projects, and translate technical complexity into practical solutions for diverse stakeholders. Equally comfortable writing production code, mentoring students, and building trust with clients.

Technical Skills

Languages: Python, R, Rust, JavaScript, PHP, Go, Dart, Ruby, C#, Perl, SQL

Data & AI: Machine Learning / Deep Learning, AI pipeline design, data validation, database design, data warehouse & data lake architecture

Environments: Relational databases, NoSQL, full-stack web development, Linux/macOS/Windows

Experience

Specialist in Data Management for Research and Healthcare: PREDIS (Plateforme de REcherche Données, Intelligence et Santé) - Québec, QC

March 2025 - Present

Designed data pipelines feeding multiple active AI research projects. Led cross-disciplinary initiatives to coordinate data management across research teams and scientific domains. Delivered well-attended seminars on data management planning aligned with research funding requirements.

Data Scientist: CISSS-CA (Centre intégré de santé et de services sociaux de Chaudière-Appalaches) - Lévis, QC

April 2021 - February 2025

Extracted, cleaned, and integrated data from disparate hospital systems into unified repositories supporting nationwide research initiatives. Designed and implemented privacy-preserving data protocols enabling cutting-edge ML/AI research in ICU and emergency department settings during the COVID-19 pandemic. Built tools to harmonize multi-system data formats and generate synthetic patient data for use by

students and statisticians without programming experience. Mentored bioinformatics and medical students in research methods and data ethics.

Interactive Seat Map Analyst: Ticketmaster - Hollywood, CA, USA

January 2016 - April 2021

Specialized in high-stakes, time-sensitive map builds for complex venues and demanding clients. Systematized ad hoc troubleshooting practices into a structured, repeatable framework adopted across the analyst team. Founded and led a documentation portal, directing a team of writers to build a comprehensive product reference that fostered a self-serve analyst culture. Became the company's go-to resource for repairing strained client relationships through active listening and solution-focused communication.

Information Specialist: Plateforme de Recherche Clinique et Evaluative, CHU de Québec - Université Laval

October 2012 - September 2015

Provided expert methodological support for 45+ literature reviews across medicine, social science, engineering, and psychology — from graduate theses to Cochrane Systematic Reviews. Contributed to the establishment of the French-language Canadian branch of the Cochrane Collaboration (Branche Cochrane Québec). Trained graduate students, medical residents, and research trainees in systematic review methodology and reference management.

Librarian & IT Manager: Toronto Health Economics and Technology Assessment Collaborative (THETA) - University of Toronto / University Health Network

January 2008 - July 2012

Developed high-sensitivity search strategies supporting 10-16 systematic reviews annually. Designed and executed data-handling and ethics protocols for field evaluations and clinical trials, from hardware procurement through full deployment. Managed IT infrastructure for a team of 15-20 staff, ensuring compliance with Canadian (and occasionally US) health information legislation. Co-authored peer-reviewed manuscripts and reports for the Ontario Ministry of Health and Long-Term Care. Delivered annual graduate seminars on search strategy development.

Education

Master of Information Studies - University of Toronto, 2005

Digital Media Program - George Brown College, 2001

Honours B.A. in English - University of Toronto, 1998

