

Tim Thatcher

Data Scientist & Developer

🏠 thatcher.dev [in](#) trthatcher [@](#) trthatcher

Summary

Data scientist and developer with technical background in model development, database design and personal projects focused on computational statistics. Co-designed model and developed API for first real-time automated underwriting algorithm to be deployed by a life insurance company in Canada.

Education

Georgia Institute of Technology

Master of Science in Computer Science - Machine Learning (2021 Expected)

University of Waterloo

Bachelor of Mathematics in Statistics & Computational Mathematics - Computer Science Minor (2013)

Projects

Mahalangur 🔗 Developed an automated pipeline for training a **Scikit Learn** Random Forest model to predict mountain climb summit probability in **Python** and **SQLite**. Developed a prediction web API in **Flask** and a **Leaflet**-based map visualization in **JavaScript**.

Discriminant Analysis 🔗 Developed an optimized statistical classification package in **Julia** for regularized linear, canonical and quadratic discriminant analysis.

Machine Learning Kernels 🔗 Developed a foundational package to efficiently compute dense kernel matrices and approximate kernel matrices using the Nystrom method in **Julia**.

Experience

Manulife Financial

Senior Data Analyst, Sponsor Insights

2018 Nov – 2019 Apr

- Performed code reviews and supervised team of three data/business analysts and two developers responsible internal application development and internal/external reporting & analysis
- Developed reports in **Python** and optimized **MS SQL** stored procedures operating on 500M+ records
- Analysed operational data to provide commentary and advised senior leadership on the financial impacts of operational issues/claim trends

Data Analyst, Advanced Analytics

2017 Dec – 2018 Oct

- Developed web APIs for integration of machine learning models into production systems in **Flask** and **Python**, including the first automated underwriting model used by an insurer in Canada
- Collaborated with data scientists to design **Scikit Learn** models (XGBoost, Random Forest, SVM, LASSO, DBSCAN) and implemented testing, validation & monitoring processes in **Python** & **MS SQL**
- Optimized **SQL Server** databases (columnstore tables, indexing, compression) and performance tuned data integration processes in **SSIS**

Senior Pricing Analyst, Affinity Markets Pricing

2014 Feb – 2017 Nov

- Analysed travel insurance data to identify drivers of cost & profitability and presented financial results & recommendations to senior management & non-technical audiences
- Developed actuarial models to value vendor contracts and new business opportunities
- Refined & automated modelling methodology to eliminate error and reduce pricing turn-around time by 67%

Adastra

Consultant

2013 Mar – 2014 Feb

- Designed, documented, developed and tested data integration processes in **SSIS** & **Informatica**