# Aaron Janeiro Stone

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http://www.github.com/aarjaneiro

## EDUCATION

**University of Waterloo** 2018 - 2021
*Master of Mathematics in Statistics* *Waterloo, Ontario*
Research: *Mean Field Behaviour of Job Redundancy Queueing Models*

**University of Manitoba** 2014 - 2018
*B.A. Hons. in Psychology (Quantitative)* *Winnipeg, Manitoba*
Research: *Standard Error for Barlett-Based Latent Class Regression*

## AWARDS & HONOURS

- Gold Medal, Faculty of Arts (2019)
- Undergraduate Research Award (2016 & 2017)
- Dr. A.W. Hogg Undergraduate Scholarship
- D.A. Sprott Entrance Scholarship
- UMSU scholarship (2017, 2016, & 2015)
- Isbister Scholarship in Arts
- Faculty of Mathematics Domestic Scholarship

## EXPERIENCE

**VirgoCX, Inc** April 2022 - Present
*Quantitative Analyst* *Toronto, Ontario*

- Developed a market-making engine with live-trading and backtesting functionality over live and historical data using Python, Cython, and C++.
- Led the development, testing, and adjustment of hedging strategies, improving mean per-trade returns by 5%.
- Created an anomaly detection system using machine learning models trained for 50+ individual trading pairs.

**QuantConnect** January 2020 - January 2021
*Software Engineering Intern* *Seattle, Washington (Remote)*

- Developed the timeseries submodule for the open-source Lean trading engine using C# and Python, reducing model fitting times by over 80% compared to external Python packages
- Implemented new order types for execution in both backtesting and live trading on exchanges (primarily Interactive Brokers).

**University of Waterloo** September 2018 - January 2020
*Teaching Assistant / Laboratory Instructor* *Waterloo, Ontario*

- Served as a teaching assistant for STAT 333, STAT 230, STAT 202, and STAT 211.
- Instructed laboratory sessions for Applied Probability (STAT 333), introducing students to Markovian processes.

**Department of Families, Government of Manitoba** June 2016 - January 2018
*Costing Analyst* *Winnipeg, Manitoba*

- Led the development of a new costing model utilizing individual and geostatistical characteristics to optimize allocation of needs-based funding for children in care.

## TECHNICAL SKILLS

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| **Programming Languages** | Python, C/C++, C#, Cython, Lua, and R |
| **Databases & Middleware** | SQL (SQLite, MySQL, MariaDB), Redis, RabbitMQ, and ZeroMQ |
| **Tools & Frameworks** | Pybind, PythonNET, QuantLib, PyTorch, TensorFlow, and UNIX |
| **Mathematics & Statistics** | Stochastic Processes, Stochastic Calculus, Functional Analysis, and Time Series |