



# Alexandre Beaulne

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 French and English

 <https://cs.mcgill.ca/~abeaul10>  
 <https://github.com/viveshok>

## WORK EXPERIENCE

**Quant Developer Intern** 06/2018 - 08/2018  
**Akuna Capital** Chicago

- Implemented a new automated trading strategy for auction participation that was deployed to production
- Migrated orderbooks consumption from snapshots to incrementals, shaving single-digits seconds in latency

**Data Scientist** 01/2016 - 03/2017  
**Eclipse Trading** Hong Kong

- Researched, designed and implemented a data pipeline to enable fast and accurate data-driven decision making
- Developed fine-grained statistical analyses of trading algorithms latency and performance using Kdb/Q and Python

**Junior Software Developer** 06/2013 - 12/2015  
**Eclipse Trading** Hong Kong

- Co-lead design and implementation of critical component of infrastructure transporting in realtime hundreds of millions of data points daily across Asian exchanges, yielding vast improvements in uptime and latency

**Python Developer** 07/2012 - 12/2012  
**Demand Analytics** Hong Kong

- Wrote bots in Python that systematically crawl the web and collect targeted data
- Built infrastructure to clean, store and query collected data in NoSQL database
- Heavy use of open-source technologies including Unix, MongoDB, PostgreSQL, Git

**Database Applications Developer** 04/2011 - 12/2011  
**Innocap Investment Management** Montreal  
**(National Bank of Canada & BNP Paribas)**

- Developed and optimized complex queries in object-oriented MS SQL Server
- Automated the reporting of assets under management, Profits&Losses, Value-at-Risk and stress tests, leveraging my knowledge for both quantitative risk management and relational databases
- Acted as liaison between Investors Relations team and IT department, mapping business issues to technical solutions

## EDUCATION

**M.Sc. Computer Science** 01/2017 - 08/2020  
**Université de Montréal** Montreal

- Coursework: Algorithms, Machine Learning, Deep Learning, Reinforcement Learning

**Recurse Center** 02/2013 - 05/2013  
New York City

- Three-month immersive retreat for becoming a better programmer
- Spent time learning about Python networking and concurrency models

**M.Sc. Financial Engineering** 2009 - 2012  
**Université de Montréal - HEC** Montreal

- Thesis on exchange rates correlation modelling, extract available at <http://ssrn.com/abstract=2067359>
- Presented results at IFM2 2012 Mathematical Finance Days, a financial mathematics conference featuring top scholars from six continents

**CFA designation** 2009 - 2011

- Completed the three exams, charter pending application

**B.Sc. Computational Neuroscience** 2006 - 2009  
**McGill University** Montreal

- Undergraduate thesis on statistical analysis of neuronal activity in macaque's visual cortex
- Graduated with Distinction

## TECHNICAL SKILLS

Languages: Python 3 (numpy, pandas, pytorch), Q, Erlang  
Databases: Kdb/Q, PostgreSQL  
Software/tools: Amazon AWS, Docker, Git, bash & UNIX, L<sup>A</sup>T<sub>E</sub>X