Eric Huan

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EDUCATION

Georgia Institute of Technology **Remote**
Master of Science, Computer Science – Machine Learning Specialization, 4.0 Jan 2022 – Present
Relevant Coursework: Artificial Intelligence, Reinforcement Learning

University of Waterloo **Waterloo, Ontario**
Bachelor of Mathematics, Mathematical Finance and Statistics Double Major Sept 2015 – Dec 2020

- **Relevant Coursework:** Computational Methods in Finance, Computational Inference, Forecasting, Statistical Learning, Sampling and Experimental Design, and Data Structures

PROJECTS

Grid Search Comparison Visualizer

- Built React application for visualizing search algorithms with a twist. Run two search algorithms on an unweighted grid in lock step and see how the search frontier converge/diverge.
- Implemented A* search and Dijkstra's algorithm as well as their bidirectional variants.

Python Scheduler

- Built Python library for structuring and executing complex sets of jobs. Utilizes asyncio and croniter to time and trigger processes and allows multiple processes to be executed concurrently.
- Parses process and job configuration based on a pre-defined JSON schema and executes jobs through the command line. Utilizes Factory design pattern to generate jobs/processes/triggers.

WORK EXPERIENCE

British Columbia Investment Management Corporation **Remote**
Quantitative Developer – Total Fund Management Jan 2021 – Present

- Architected and fully developed a robust python package for scheduling jobs and job groups. The asynchronous tool provides a holistic approach to automate complex and repetitive processes
- Actively contributed to the development of software tools for TFM. Utilized Python, SQL, and .NET C# to develop ETLs and scripts for portfolio analytics and attribution analysis.
- Utilized Dash to create a cohesive ecosystem of web applications for data analysis and visualization.
- Supported the $3 billion total fund rebalancing mandate involving multi-client portfolios and trades across developed and emerging market equities, fixed income, and credit

British Columbia Investment Management Corporation **Remote**
Quantitative Developer – Total Fund Management Sep 2019 – Dec 2019

- Focused primarily on the development of quantitative tools for TFM under version control systems. Technologies used during development include .NET C#, C++, Python, SQL, and Excel
- Designed and implemented the core engine for TFM's in-house portfolio optimizer in C++ involving constrained optimization and data marshalling to and from C#
- Supported the development of data pipeline infrastructure by integrating SQL database updates into a modular parameter-based process using a mix of C# and SQL
- Carried out the fund performance benchmarking process through detailed analysis of external manager performance

TECHNOLOGIES

- Python, C#, Javascript, SQL, C++, HTML, CSS, R, C
- React, Git, SQL Server, .NET, Dash, Pandas, NumPy