

Sam Patterson

3108 - 1033 Marinaside Crescent
Vancouver
V6Z 3A3

Phone: +44 (0)7717 872 847
Email: sam.x.patterson@gmail.com

Employment

Research Engineer

Borealis AI, March 2021 - Present

Research engineer working on neural network architectures for financial forecasting. Currently focused on improving performance and reproducibility of PyTorch training pipeline.

Research Software Engineer

G-Research, February 2018 - December 2020

Collaborate with researchers to develop and implement neural network architectures for financial forecasting using TensorFlow. Optimize model training pipelines. Use research and engineering knowledge to develop shared research tooling.

Quantitative Trader

KCG, January 2014 - April 2017

Managed a high-frequency trading strategy. Responsible for all aspects of research and trading: developing research code, feature research, model generation, monitoring trading and post-trade analysis.

Quantitative Developer

KCG, August 2013 - January 2014

Developed a framework for quantitative research which enabled a rapid, iterative research cycle. Written in Python & Cython and using cluster computing it delivered a large increase to research productivity.

Vice President, Financial Institutions Derivatives Marketing

JPMorgan

Analyst, Credit Derivatives Structuring

UBS

Intern, Fixed Income, Currencies and Commodities

Goldman Sachs

Education

Programming Retreat

The Recurse Center, May - August 2017

Took part in a retreat at The Recurse Center in New York, focussed on developing my computer science knowledge and becoming a better programmer.

Ph.D. Student, Gatsby Computational Neuroscience Unit (Uncompleted)

UCL, 2011 - 2013

Studied for a Ph.D. in Machine Learning.

M.Sc. Computational Statistics and Machine Learning, Distinction

UCL, 2010 - 2011

Topics include: Unsupervised learning and approximate inference; Graphical models; Reinforcement learning; Machine vision. Dissertation: Online topic modelling in large scale document collections.

Publications

1. S. Patterson and Y. W. Teh. Stochastic Gradient Riemannian Langevin Dynamics on the Probability Simplex. In *Advances in Neural Information Processing Systems, 2013*.