Alexander McFarlane

Contact Information

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Background

- Identifying & leading collaborations across multiple departments and geographies
- Mathematical background: High energy theoretical physics
- Rapid conversion of ideas into business relevant code
- `Python`: ~100 answers, 9 years coding experience (6 professional)

Professional Experience

Nomura International, Quantitative Investment Strategies, London UK
Desk Strat (Associate) Nov. 2018 - Present

- Quant prototypes for trading, structuring & research
- Researching systematic strategies for new products
- Winning trades with quant / technical client solutions
- Preventing operational risk events via infrastructure improvements
- Designed, lead and organised a global initiative to teach `python` to GM / IBD & Corporate
- Adhoc quant projects: Researching & presenting prototypes from new papers
- Implemented APIs now used across firm for Bloomberg
- Daily user: `Python` (numpy, numba, pandas), `git`

Nomura International, Risk Methodology Group, London UK
Quantitative Analyst (Associate) Nov. 2016 - Nov. 2018

- End-to-end FRTB curvature model & PnL attribution
- Adhoc tactical tools & optimisations for quants / trading
- Daily user: `Python` (pandas, numpy, sklearn, TensorFlow), `git`

Webranz & Fonterra, Global Dairy Intelligence, Auckland NZ
Quantitative Data Architect & Consultant Oct. 2014 - Aug. 2015

- Lead of quant solutions in data acquisition & prototype research
- Daily user: `Python` (web-scraping, analysis, research)

Commerzbank AG, Models & Calibration EMC, London UK
Junior Quantitative Analyst (off-cycle internship) Feb. 2014 - Aug. 2014

- Validating the structure of exotic trades e.g. algo. indices & hybrid notes

Education

The University of Edinburgh, M.Sc. Theoretical Physics 2015 - 2016
Dissertation: Generalised Hybrid Monte Carlo - `Python` - supervised by model authors

The University of Surrey, B.Sc. Hons. Physics with Finance, *2:1* 2009 - 2013
Dissertation: Modelling Value at Risk (VaR) - `Fortran` - original implementation

Projects

The University of Auckland, Stochastic Estimation & Robotics Lab 2014
Research Programmer: Deep Neural Networks - `python-theano`

Extracurricular

Institute of Physics *Member (MInstP)* 2014 - Present
Institute of Mathematics *Associate Member (AMIMA)* 2014 - Present
Surrey University Snowsports *Captain / Social Secretary / Elite Athlete Scholar* 2009-2013

Referees Available on Request