Alexander McFarlane

CONTACT INFORMATION

alexander.mcfarlane@physics.org
+44 (0) 7871 535 862

Currently working on Deep Learning projects.
Available for interview for Nov. starts.

Background

- Quant. experience: Equity & credit exotics
- M.Sc. in Theoretical Physics (graduating November)
- Monte Carlo for high dimensional problems
- Deep Machine Learning research: Stochastic applications (weather)
- Programming: `Python`, `Fortran`, `VBA`

Professional Experience

Webranz & **Fonterra**, Global Dairy Intelligence, Auckland, NZ
Quant. Data Architect & Consultant (gap year) — Oct. 2014 - Aug. 2015

- Lead of quantitative solutions in data acquisition for data science & modelling
- Researched / introduced social media sentiment analysis to Fonterra Insights (quant) team
- Daily user: `Python` (web-scraping, analysis, research)
- Casual user: `SQL`, `regex`, `bash`, `PowerShell`, `Alteryx`, `Tableau`, `Neo4j`, `Bloomberg`

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

- Author of the Model Validation for PV and Δ calculations on Factor & Pair Factor Certificates
- Validating the structure of exotic trades in equities, commodities and alternative investments
- Writing efficient `VBA` model validation routines to reduce workload & take on additional projects
- Daily user: `VBA`, `SPLiFE` (CBK language)
- Casual user: `Bloomberg`

Education

The University of Edinburgh, M.Sc. Theoretical Physics, *Expected Merit* — 2015 - Present
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`

Extra Curricula

Institute of Physics *Associate Member (AMInstP)* — 2014 - Present
Institute of Mathematics *Associate Member (AMIMA)* — 2014 - Present
Surrey University Snowsports *Snowboard Captain (Awarded Full Colours)* — 2012 - 2013
Surrey University Snowsports *Social Secretary ("Investors in Club" Award)* — 2010 - 2011

Awards & Grants

- Scargill Educational Foundation — 2015
- The Ann Powtrell Foundation — 2015

Referees Available on Request