

# Alexander McFarlane


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## CONTACT INFORMATION

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<http://flipdazed.github.io>

## BACKGROUND

- Identifying & leading collaborations across multiple departments and geographies
- Strong mathematical background: High energy theoretical physics
- Strong reputation for rapid conversion of ideas into business relevant code
- Key link between quants, IT and trading
- Strong Python: ~100  answers, 9 years coding experience (6 professional)

## PROFESSIONAL EXPERIENCE

**Nomura International**, QIS, London UK  
*Desk Strat (Associate)*

Nov. 2018 - Present

- Rapid quant prototypes for trading, structuring & research
- Researching systematic strategies for new products
- Winning trades with quant / technical client solutions e.g. collaborative quant research
- 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  
*Dissertation: Generalised Hybrid Monte Carlo - Python - supervised by model authors*

2015 - 2016

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

2009 - 2013

## PROJECTS

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

2014

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*