Andrew Miller

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Referees available on request

Relevant Skills

- Computer Training:
  - Proficient coding ability in multiple languages, including Python, C++, R, HTML, VBA and JavaScript.
  - Adept with programs like Microsoft Office, Google Workspaces, Power Platform, Tableau, Adobe Creative Suite, MatLab, Origin and SSML. Also familiar with the SAP & Oracle accounting systems.
  - Production-level development experience including AI agentic working principles.
- Masters' dissertation and CQF final project on novel trading strategies using machine learning algorithms, such as LSTM convolutional neural networks and genetic reinforcement, to predict arbitrage opportunities.
- Developed income & hedging strategies across retail & commercial banking products, as well multiple market-traded asset classes, including FX, rate instruments and fixed income.
- Advanced understanding of complex models and valuation of financial instruments, generating large gains in model runtimes and calculation efficiency with the Starling Front Office Treasury team.
- Experienced developer with Data & Engineering teams creating data pipelines using Microsoft Azure and Google Cloud, application development using Git, and familiar with model/parameter optimisation.
- Performed detailed credit risk analysis and expected losses VaR modelling reperformance using Monte Carlo simulations in R for UK Export Finance at the NAO using PD and LGD concepts.
- Advanced mathematical, statistical, and financial knowledge through degrees and ACA/CQF qualification.

Professional Experience

STARLING BANK, LONDON

April 2025 – present **IRRBB Manager: Quantitative Analytics**

- Currently managing a team of cross-cutting analysts in rapid application development: recent projects include a Markov Model to predict completion rates, several Python packages and a treasury portfolio optimiser.
- Developed sophisticated end-to-end tooling for Asset Liability Management (covering multiple areas of Finance), Operations (through a Treasury Management System) and income strategy generation.
- Contributed to the market execution strategy and risk monitoring of a brand-new structural hedge of the Bank's deposits, including the creation of a balance duration model using multiple modelling techniques.
- Introduced training to upskill the IRRBB team's capabilities in data analytics, including the use of integrated GCP tools such as BigQuery, Looker and hosted Jupyter Notebooks.

February 2023 – March 2025 **IRRBB Analyst**

- Improved regular reporting processes within IRRBB and the wider Treasury team, suggested and implemented alternative benchmark metrics and stress tests, and improved documentation standards.
- Analysed and modelled customer behaviours to create prepayment/early withdrawal assumption sets using traditional statistical models and machine learning techniques, and presented them to our ALCo.
- Interacted with the trading desk to execute deals to manage interest rate risk exposure, valued FX swaps and IRS instruments, and created a net hedging optimisation tool to minimise our exposure by tenor.
- Proposed and created a proof-of-concept modular TMS in Python in order to productionise and standardise Front Office Treasury work, including ALM, risk and liquidity monitoring, as well as hedge accounting.

NATIONAL AUDIT OFFICE, LONDON

September 2018 – January 2023 **Audit Principal**

- Delivered a wide variety of audits of public sector departments including the Ministry of Defence, UK Export Finance, and the Competition and Markets Authority, as well as several charities.
- Managed both large and small audit teams to meet strict deadlines and conducted multiple site visits.
- Contributed to several high-profile published value-for-money (VFM) reports and investigations and presented highly complex accounting judgement papers to senior internal and external stakeholders.
- Performed detailed credit risk analysis on financial insurance products, recreated complex expected credit loss models in R, and used Monte Carlo simulations and scenario analysis to stress test the models.
- Developed bespoke data analytics applications for audit teams in R, Python and SQL using Git, Databricks and Azure (DevOps) platforms as part of the Data Analytics Research Team.

SUMMER INTERNSHIPS, VARIOUS LOCATIONS

- **Finance Summer Intern, Centrica plc (2017):** Generated business performance reports, cashflow forecasts, associated controls, and management accounts for a publicly traded company.
- **Summer Intern, Moixa Technology Ltd (2016):** Developed a competitive website analysis, proposed expansion strategies to investors using Python mapping, and improved the company's financial model.
- **Coding Analyst & Consultant, National Physical Laboratory (2015):** Created a cutting-edge phase unwrapping algorithm in Python codes for an interferometry experiment in dimensional metrology.

Education & Qualifications

2023 **Certificate of Quantitative Finance (CQF), CQF Institute**

- Completed Level 1 & 2 including 3 exams and final project on stock price prediction using deep learning.
- Key topics: stochastic calculus, Martingales and Black-Scholes, portfolio management, option pricing theory, volatility and interest rate modelling, derivative market structure, VaR and XVA, yield curve construction.

2018 – 2021 **ACA, Institute of Chartered Accountants of England and Wales (ICAEW)**

- Fully ACA-qualified by completing all requirements, including over 450 days professional work experience.
- Passed 15 exams covering finance, accountancy, and business topics, including a complex case study.

2017 – 2018 **MSc Business Analytics, University of Surrey Business School**

- Attained a high distinction (81%), with 84% in written dissertation (highest in class) on triangular arbitrage forecasting using time series analysis and machine learning techniques in Python.
- Key electives: Investments, Econometrics, Finance & Accounting, Data Analytics & Machine Learning

Summer 2016 **ILM Level 5 Management of Volunteers Qualification, Imperial College Union**

- Attended 2 full lecture days on volunteer leadership skills, completed 2 written assignments on national trends in promoting volunteering, and managing the motivation of volunteers under one's jurisdiction.

2014 – 2017 **BSc (Hons) Physics, Imperial College London**

- Attained a high 2:2 (58.4%), with a high 2:1 achieved in written dissertation and 87% in Finance and Financial Management module, covering financial market theory and investment analysis.
- Winner of the Gloucester Research Prize for Academic Excellence in 2015.

Other Responsibilities

2025 - present **Board Advisor Placement, Connectd**

- Currently building my C-suite/executive presence by taking a ConnectdTransition to Portfolio Board Advisory course to increase my network, including a 6-month placement and paid startup opportunities.

2020 – present **Treasurer, Merrow Badminton Club**

- Bookkeeping and annual accounts production for the club, inventory management of shuttles and club equipment, as well as general committee responsibilities, such as club tournament and event organisation.

Interests & Achievements

Sports: - Men's team captain of Victoria Badminton Club playing at a highly competitive county level
Ex-member of the Imperial College 1st XI Football Team and former FA Level 7 referee
Completed the 3 Peaks Challenge in under 24 hours and the C2C Cycle Trail

Languages: Japanese: JLPT Level 3 (1st-year University); French: DELF (AS Level equivalent)

Other Interests: - Hobbyist Python application programming; Grade 8 clarinet and piano at distinction level