

Robert Andrew Martin

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EDUCATION

UNIVERSITY OF CAMBRIDGE

PHYSICAL NATURAL SCIENCES

UNDERGRADUATE

October 2018 – Present

SJI-INTERNATIONAL

IB DIPLOMA – 45/45

IGCSE – 9 A*

2009-2015 | Singapore

SKILLS

LANGUAGES

English – native

Spanish – business proficiency

PROGRAMMING

Proficiency

Python (especially NumPy, pandas, sklearn, Flask)

Experience

Java • R • JavaScript • SQL • HTML/CSS

Exposure

Mathematica • Solidity • Matlab • Haskell

CERTIFICATIONS

- CT1 Financial Mathematics – Institute and Faculty of Actuaries
- Higher Certificate in Healthcare Support – SkillsFuture SG
- CIAiT Plus International Diploma

SOCIETIES

- Cambridge Blockchain Society – Venture Capital Director
- Hackbridge – Project Member
- Cambridge University Algorithmic Trading Society
- Cambridge University Finance and Investment Society
- Christ's College Tennis Team

LINKS

Github:// [robertmartin8](#)

LinkedIn:// [robert-a-martin](#)

EXPERIENCE

NOGLE LTD | QUANTITATIVE ANALYST INTERN

Jun 2018 – Oct 2018 | Taipei

- Project lead: using modern portfolio optimisation techniques to build smart cryptoasset allocations.
- Developed novel estimators of the covariance matrix which outperformed standard shrinkage methods in out-of-sample testing.
- Built and presented rigorous backtests, including custom slippage models and analysis of turnover.
- Investigated cryptocurrency market microstructure and worked towards building predictive high-frequency models using machine learning techniques.

SCI LTD | FULL STACK FINTECH DEVELOPER

Nov 2017 – May 2018 | Remote

- Built an MVP robo-advisor service from first principles using Flask and MySQL.
- Designed and implemented financial screens and portfolio optimisation strategies, integrated with the Interactive Brokers API.
- Conducted backtests for proprietary investment strategies, along with user-facing interactive data visualisations.
- Built a scraper to acquire financial data from US/Japan corporate reports.

SINGAPORE ARMED FORCES | COMBAT MEDIC SPECIALIST

Jul 2016 – May 2018 | Singapore

- Completed the challenging 2-month Medical Response Force Conversion Course, involving continuous high-risk activity in a full-bodied chemical suit and gas mask, with constant emphasis on teamwork and command.
- Selected to become a specialist based on performance under pressure, with subsequent leadership roles in multiple military exercises with the Special Forces.

PROJECTS

PYTHON PORTFOLIO OPTIMISATION | PYTHON

Jun 2018 – Present

PyPortfolioOpt is my extensively-documented portfolio optimisation package, available on PyPI, that implements both the classical efficient frontier and modern improvements, along with novel experimental methods that I developed.

MACHINE LEARNING ON STOCKS | PYTHON, R

Feb 2016 – Present

Predicting stock returns by training ML classifiers on 15+ years of scraped fundamental financial data. A simplified version of this project has been open-sourced on GitHub, but my private branch is still actively developed.

ACADEMIC BLOG | HTML/CSS

May 2017 – Present

ReasonableDeviations is my academic blog which includes writings on quantitative topics, notes for various courses and textbooks, and summaries of journal articles.

AWARDS

- 2018 SJI-Foundation Christ's College Cambridge merit-based scholarship
- 2015 SJII Academic Award for the top academic student in the cohort
- 2015 SJII Subject Awards: Physics, Mathematics, European Languages
- 2014 Merit-based scholarship for the IB Diploma Programme at SJII