Harry Charlesworth

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PERSONAL PROFILE

Physics Master's graduate with a strong quantitative background, solid programming skills, and a genuine interest in financial markets. Highly motivated, analytically rigorous, and a practical problem-solver. For examples of my work, projects, and a fuller picture of who I am, please see my website.

EXPERIENCE

Work Experience – Invesco (November 2025)

- Gained first-hand exposure to live market execution, trade flow, Bloomberg systems, and cross-desk interaction on Invesco's trading floor
- Spent time with a wide variety of teams, such as Equities, Derivatives, Sustainable Investing, Fixed Income, and RFP, helping build an understanding of the wider aspects of the business

Research Assistant – University of Southampton (June – August 2024)

- Completed a funded eight-week research studentship, optimising an optical setup and developing MATLAB control code for a nano-positioner used under vacuum and cryogenic conditions
- Successfully delivered the optimised system and control code within the eight-week period, meeting the project deadline.

Other Experience (2017 – 2025)

- Employment across various roles, developed skills of teamwork, resilience, and communication
    - **Warehouse Assistant –** The Range (June – August 2025)
    - **Hospitality –** Flora's Food & Kitchen (2017 – 2024)
    - **Event Staff –** Serve Southwest (2020 – 2024)
    - **Crew Member –** McDonald's (2020 – 2021)

FINANCE PROJECTS

Full project detail available on personal website (link at top)

Monte Carlo Option Pricing

- Researching and implementing Monte Carlo simulation methods for option valuation
- Reviewed academic approaches to guide model design and validation
- Building pricing engines incorporating convergence control, variance reduction, and Greeks estimation

Finance Glossary Project

- Created and categorised a 246-term finance glossary to clarify core concepts (derivatives, risk, signals, execution, quant methods)
- Developed a structured taxonomy, improving conceptual understanding across markets and quantitative finance

EDUCATION

University of Southampton Second Class Honours, Upper Division
Master of Physics with Astronomy (MPhys) (2021 - 2025)

- Strong quantitative foundation demonstrated across high-scoring mathematical modules
- Advanced Python and Linux skills developed in teaching modules, labs, and research projects
- First-class dissertation with large-scale data handling, modelling, and statistical significance testing

Blundell's School (2013 – 2020)

- A Levels (June 2020): Maths (A), Physics (A), Drama (B), Extended Project (A)
- GCSEs (June 2018): 9 subjects including Maths and English

KEY SKILLS

- Quantitative analysis & modelling
- Data analysis & statistical reasoning
- Adaptability & willingness to learn
- Independent research & problem-solving
- Communication & presenting
- Teamwork & Collaboration

TECHNICAL SKILLS & SOFTWARE

- **Python** – (NumPy, pandas, SciPy, Matplotlib) (data analysis, modelling, visualisation)
- **MATLAB** (automation, data processing)
- **Linux –** (Bash) (data acquisition, data processing)
- **LaTeX** (technical documentation)
- **Excel** (data structuring & reporting)
- **GitHub** (version control)
- **HTML, CSS, JavaScript** (website building)

ACHIEVEMENTS & INTERESTS

- UKMT Senior Maths Challenge – Highest score in year; Kangaroo round invite
- NEA Grade 8 Acting (Distinction)
- 1st XV Rugby (University, School, Club)
- Ocean & Earth Football Club (University)
- Duke of Edinburgh Bronze
- Ten Tors (35-mile)
- Sailing (RYA level 4)
- Piano & Trombone (ABRSM grade 4)
- RYA powerboat licence