

# Harry Charlesworth

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## PERSONAL PROFILE

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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

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### 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

- Employment across various roles, developed skills of teamwork, resilience, and communication

- **Warehouse Assistant** – The Range
- **Hospitality** – Flora's Food & Kitchen
- **Event Staff** – Serve Southwest
- **Crew Member** – McDonald's

(June – August 2025)

(2017 – 2024)

(2020 – 2024)

(2020 – 2021)

## FINANCE PROJECTS

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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

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### University of Southampton

Master of Physics with Astronomy (MPhys)

Second Class Honours, Upper Division

(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

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

## TECHNICAL SKILLS & SOFTWARE

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

## ACHIEVEMENTS & INTERESTS

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- UKMT Senior Maths Challenge – Highest score in year; Kangaroo round invite
- NEA Grade 8 Acting (Distinction)
- 1<sup>st</sup> 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