

# Sidney George Walter Woodcock

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Recent Mathematics and Philosophy graduate from the University of Bristol with a strong foundation in analytical reasoning and quantitative methods. Eager to apply numerical expertise and agile decision-making capabilities to problem-solving in a data-driven business setting. Proficient in mathematics and object-oriented programming in Python, with a focus on applications to data processing and analysis. Equipped with a breadth of experience across both academic and professional contexts, bringing a well-rounded and adaptable approach to complex challenges.

## EDUCATION

### University of Bristol

Bristol, UK | Sep 2020 – Aug 2024

*Mathematics and Philosophy BSc – Second Class, Upper Division (2.1)*

Key Modules: Optimisation (78%), Ordinary Differential Equations 2 (80%), Multivariable Calculus and Complex Functions (78%), Philosophy of Mathematics (70%), Logic (64%)

### Collingham

London, UK | Sep 2019 – Aug 2020

*A Levels: Mathematics (A\*), Further Mathematics (A), Latin (A)*

### Watford Grammar School for Boys

Watford, UK | Sep 2012 – Feb 2019

*12 GCSEs: Mathematics (9), English Language (9), English Literature (7) plus 7×A\*, 1×A, 1×B*

## SKILLS

Mathematics (Logic, Analysis, Linear Algebra, Differential Equations, Discrete Mathematics) | Microsoft Office | Google Workspace | Python (NumPy, SciPy, sklearn, pandas, Jupyter Notebook, PyTorch) | MATLAB | Excellent written and verbal communication (argumentation, essay writing, debating, presenting, pitching, sales)

## COURSES & CERTIFICATES

### MITx

Jan 2025 – May 2025

*6.86x – Machine Learning with Python: From Linear Models to Deep Learning (edX)*

Advanced course covering supervised and unsupervised learning, deep learning with neural networks, and reinforcement learning. Built topics from a conceptual, foundational level through to practical implementation using real data in Python. Applied and deepened knowledge of probability theory, linear algebra, mathematical optimisation, and Python packages.

### MITx

Sep 2024 – Dec 2024

*6.431x – Probability – The Science of Uncertainty and Data (edX)*

Covered probability theory comprehensively, progressing from axiomatic foundations through core topics such as conditioning, counting, and random variables, up to advanced areas including Bayesian inference, Markov chains, and Poisson processes, with an emphasis on both theoretical understanding and technical, practical applications to data analysis and modelling.

### KAIST

Aug 2024

*Introduction to Quantum Information (Coursera)*

Foundational course introducing the fundamentals of quantum mechanics as applied to the representation and processing of information. Explored key theory, structures, and concepts including the axioms of quantum theory, qubits and quantum states, quantum circuits and gates, and entanglement, noting their realisation in quantum computing and communication.

## WORK EXPERIENCE

### Virgin Media O2

Watford, UK

#### Retail Advisor

Dec 2024 – Present

- Advised customers on product selection, returns, and upgrades, tailoring packages to their needs
- Stayed informed on promotions, FCA guidelines, and payment policies to provide helpful and compliant customer service, reviewing contracts with customers to ensure transparent and compliant sales
- Upheld and acted in accordance with fraud prevention procedures
- Consistently exceeded sales targets by upselling devices and accessories including smart watches and tablets

### SeeWoo UK

London, UK

#### Finance Intern

Dec 2022

- Leveraged cross-functional collaboration and organisational skills to liaise directly between the financial director and fulfilment team members
- Managed cash book and general ledger using Excel and Access Dimensions
- Created new accounts for debtors and communicated details with the sales team
- Assisted in implementing debt management policy
- Reconciled purchase orders against goods in delivery notes and creditor invoices

## OTHER INTERESTS

**Actuarial Science** – I am fascinated by the actuarial profession and the blend of mathematical and computational prowess, economic insight, and business acumen which underpins effective actuarial practice. I closely follow developments within the profession and the broader insurance industry, having attended conferences with Aon – where I discovered the diverse roles actuaries play across different domains – and with ProActuary, which focused on the evolving impact of AI and large language models on actuarial work, professional training, and the future of the insurance and pension industries.

**Music** – I have a strong interest in a broad range of music, having played the French horn in the senior orchestra, brass ensemble, and senior wind band at Watford Grammar School for Boys. I have also organised group travel to music events, and I DJ in my own time as a hobby.

**Game Development** – I have participated in paid private playtests for unreleased video games, providing feedback on gameplay elements and technical performance.