# Oliver Simmonds

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## EDUCATION

#### University of Southampton - MSc in Artificial Intelligence (July 2023 - September 2024)

- Recipient of the Richard Newitt Postgraduate Taught Bursary in recognition of receiving the highest average mark in the School of Electronics and Computer Science.
- With recognition from G-Research, awarded for receiving the highest grade in Artificial Intelligence.
- Distinction award 80%, dissertation title Evolving Molecular Representations

### University of Bristol - BSc in Mathematics (September 2020 - July 2023)

- First Class Honors Degree 81%.
- Hired as a Mathematical Programming tutor teaching Python to first-year students (January May 2023).
- Co-founder, Artificial General Intelligence Safety Group (October 2022 Present): Led collaborative research and discussions on AGI Safety, and completed AGI Safety Fundamentals course.
- University of Bristol Futsal Vice President (May 2022 July 2023): Founded a women's team, secured sponsorship, captained squad to European Universities Championships.

# Peter Symonds College - A-levels (August 2018 - June 2020)

• Mathematics: A\*, Further Mathematics: A\*, Physics: A, EPQ: A

### KEY SKILLS

- Proficiency in Python, SQL, R, Java, Fabric (Power BI) and Azure cloud computing. Working knowledge of C++.
- Proficiency in Pandas, NumPy, Scikit-Learn, TensorFlow, Keras, PyTorch, LangChain, and LanGraph.
- Driven to advance AI in a safe, sustainable way, with a strong ability to quickly learn and adapt to new environments.

#### SSE

# Data and Analytics Graduate Scheme (September 2024 - Present)

- Collaborating with AI and data leads across the business, contributing to AI production and governance, helping SSE achieve its NetZero objectives ethically and sustainably.
- Developed web scrapers, built chatbot applications using RAG models, implemented NLP to identify FAQs, and automated several processes, streamlining operations and improving decision-making.
- Gained experience with cloud computing, data storytelling, demand management, value realisation, and risk management.
- Gained qualifications in cybersecurity, Databricks Academy, and DataCamp. Qualified as a Mental Health First Aider (MHFA England). Taking all opportunities to learn and develop through the graduate scheme.

### Additional Work Experience

# University of Southampton - Air Quality Research Internship (January 2024 - Present)

- Funded by local councils to work alongside an associate professor to investigate PM2.5 patterns across Hampshire.
- Presented results at the Low Cost AQ Sensor Systems Symposium 2024 and produced a local government policy brief.
- Utilised data mining techniques to discover key insights that the councils can use to improve local air quality.

### Systema Nova - Performance Model Engineer (March - April 2023)

- Developed, in a team of four, a profit distribution model for one of Europe's largest angel-based venture capitalist programs, utilising advanced statistics and optimisation techniques.
- Produced in-depth reports and presentations using rigorous statistical techniques to demonstrate both the model's strengths and potential weaknesses.

### BigHand - Data Science Intern (July - August 2022)

- Developed a revenue prediction model using historical pipeline data which outperformed the existing model.
- Gained insights into how machine learning algorithms were implemented to price products.

### Projects

# University of Southampton - Evolution of Molecular Representations - Grade of 78% (September 2024)

- Researched the use of evolutionary algorithms for building molecular representations with applications in drug discovery.
- Developed a novel technique for encoding molecules, achieving top performance in some regression tasks.
- Conducted experiments on the University of Southampton's supercomputer Iridis.

### University of Bristol - Investigating Generalisation of Reinforcement Learning Algorithms (April 2023)

- Co-authored a research project gaining greater insight on both machine learning and generalisation.
- Received award-winning grade of 85%.

# GitHub - https://github.com/olisimmonds

• See my GitHub for personal projects, including a personal RAG chatbot which answers questions about me, the initial workings of an algorithmic trading bot and some of the code from my University projects.

### References available on request