

Sam Haskell

🏠 samhaskell.dev | github.com/SamHaskell | [linkedin.com/in/samhaskell](https://www.linkedin.com/in/samhaskell)

Profile

A Computational Physicist, looking to transition into an entry-level role within the software/games industry. Highly motivated in systems programming, specialising in game engine development. Currently developing a cross platform games framework using C++ and OpenGL. An independent and confident learner, with strong project management and communication skills.

Work Experience

University of Manchester

Manchester, UK

Graduate Teaching Assistant

September 2020 - Current

- Facilitated introductory scientific computing courses in Python, Numpy, Scipy, and Matplotlib for a large cohort of undergraduate physics students.
- Empowered students to utilise chi-squared analysis, least-square regression, and a variety of numerical integration techniques to generate, manipulate, and visualise data with confidence.
- Led weekly workshops offering advice to students to improve the legibility, maintainability, and performance of code.

Atkins-Realis

Bristol, UK

Engineering Consultancy Internship

June 2018 - Sept 2018

- Worked directly with consultants at leading firms in the UK nuclear industry over three months to aid in the planning and development of improved waste management processes.
- Used Python to develop a Monte-Carlo simulation of a planned waste disposal campaign, drastically reducing the number of assumptions inherent to the existing models. This allowed for much faster iteration times, giving more freedom to the team to explore the potential of a variety of waste management solutions. The results of this analysis also prompted the team to adopt Python for their statistical analysis over the existing Excel/Microsoft Visual Basic workflow.

Education

University of Manchester

Manchester, UK

PhD in Condensed Matter Physics

Sept 2020 - Current

- Currently undertaking a PHD project in the field of 2D Nanomaterials. Primarily studying Quantum Spin Liquid systems, Mott Insulators, and Twisted Heterostructures.
- Extensive experience with data generation, analysis, and visualisation in Python and Julia.
- Experience writing performance aware code for solving complex condensed matter models.
- Published paper (see publications) and accompanying conference talk at CMD29, the largest Condensed Matter Physics conference series in Europe.

University of Bristol

Bristol, UK

MSci Theoretical Physics

Sept 2016 - June 2020

- Graduated with first-class honours. Masters thesis in the study of Foundational Quantum Mechanics.
- Studied Theoretical Physics, with a heavy emphasis on Mathematics modules including Random Matrix Theory, Quantum Information Theory, Quantum Chaos, Analytical Mechanics, Statistical Field Theory, and Complex Analysis.
- Worked as a senior study session leader for two years, planning and leading collaborative weekly study groups for second-year Physics undergraduates.

Skills

Programming C11, C++17, Python, Julia, C#

Mathematics Linear Algebra, Calculus, Probability, Combinatorics, Dynamics, Analytical Mechanics.

Misc Git, CMake, Premake, Shell Scripting, LaTeX, Trello, VSCode, Unix, OpenGL.