Dr Jack Griffiths

Computational physicist and AI/ML specialist.

Now

Postdoc in AI for Neuromorphic Spintronics Sheffield University, U.K. (2025–now) Working on things.

Past

Innovation Engineer

Origin, Newcastle, United Kingdom (2024–2025)

- Designed, developed, and project managed (using agile) innovative, multi-million pound AI and data science solutions in the water and onshore gas industry.
- Assisted development of new research areas, applying for grants, and executive buy-in.
- Led policy on good software development (using Git) and documentation for ISO 9001/27001.

PhD Theoretical Physics

Durham University, U.K. (2020–2024)

Thesis: Artificial Intelligence in Physics, url: <u>https://etheses.dur.ac.uk/15828/</u>

Solving physics-based initial value problems with unsupervised machine learning, url: <u>https://doi.org/10.1103/</u><u>PhysRevE.111.055302</u>.

Single-shot thermometry of simulated Bose–Einstein

condensates using artificial intelligence, in preparation.

- Developed machine learning methods and theory to solve differential equations in physics.
- Developed convolutional neural networks to predict thermodynamical parameters of quantum gases.

MPhys Master of Physics (First Class Honours)

Newcastle University, U.K. (2016-2020)

Dissertation: Finite-temperature simulations of a quantum atomtronic interference device. Grade: 87%.

Freelance developer, MINIML Ltd. (2016-2019)

Principal developer for internationally-used educational technology products. One product won The Queen's Award for Enterprise (2019).



鶢 English (native)

🗾 Ukrainian (intermediate)

Skills: Image classification/ recognition, scientific AI, anomaly detection. Python, Rust, highperformance computing, scientific computing. Project management (agile and waterfall).

Description of Physics 1 (small group tutorials, marked weekly homework + exams; 1st year physics), Foundation of Physics 3A (assistant; quantum, nuclear, and particle physics), Maths Workshop (assistant; complex analysis, linear algebra, integral transforms).

Awards: The Queen's Award for Enterprise, ncl+ Award in Research, Gerard McCartan Memorial Prize for Outstanding MPhys Project, Gerard McCartan Memorial Prize for Outstanding Contribution to the School, Best Poster Prize at International Quantum Fluids and Solids conference 2023.

Misc: I play piano and enjoy classical & trance music. I love to travel and explore the world. Interested in design and history.

Mental Health First Aider (MHFA England)