

ALEXANDER MEAD

PhD

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- [Website](#)
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Experienced researcher and data scientist looking for the next challenge.

SKILLS

- Python (numpy; scipy; pandas; scikit-learn; pytorch)
- Fortran; C; html
- Machine learning
- Probabilistic programming
- Software development
- Version control (Git; GitHub)
- Bayesian statistical analysis/modelling
- Supercomputing (CPU/GPU)
- Numerical equation solving
- macOS, Linux, bash
- [Data visualisation](#) (matplotlib; seaborn; gnuplot; VisIt)
- [Scientific communication](#)
- Native English speaker

EDUCATION

2010–2014: University of Edinburgh
PhD, Astrophysics

2005–2010: University of Oxford
MPhys (Master of Physics), First Class, Trinity College Scholar

AWARDS

- 2016: Marie Curie Fellowship awarded €220k research budget
- 2015: CITA National Fellowship
- 2010: STFC PhD scholarship
- 2010: Peter Fisher prize, top results at Trinity College, Oxford

An experienced research scientist specialised in Machine Learning and AI. Looking for a position in which I can continue to grow and use my technical skill set. Proven track record of expertise with software engineering, statistical analysis, Bayesian statistics, predictive modelling, data visualisation, and project management. Up-to-date programming and technical skills and able to learn new skills, techniques, and languages very quickly. Strong communication skills for both scientific and non-scientific audiences. Creative, driven, and self-reliant.

EXPERIENCE

May 2022–Dec 2022: University of British Columbia; Research Associate in Computer Science

Working as part of the Programming Languages in Artificial Intelligence ([PLAI](#)) group to enhance probabilistic programming with deep-learning techniques. Bayesian statistics, machine learning, and astrophysics. Master's level CompSci teaching.

Aug 2021: Science to Data Science ([S2DS](#)) Fellow

Worked with a team of data scientists and [Thymia](#) to implement a multi-modal (speech/gameplay) machine-learning assessment of mental health based on user interactions with a specially-designed app. Wrote data-processing pipeline. Led team to write software to calculate game-interaction metrics. Isolated deficiencies in the data-collection process and identified redundancies that will make product 75% cheaper to operate in future.

Nov 2020–Jul 2021: University of Edinburgh; GLOBE Fellow

Halo-model software development; undergraduate teaching; review article writing. Machine learning to replace expensive simulations resulting in factor ~1000 saving in computation time.

Sep 2017–Oct 2020: University of Barcelona; Marie Curie Fellow

Supervised undergraduate and graduate research projects and developed 'response' theory for cosmological estimators.

Nov 2015–Aug 2017: University of British Columbia; Canadian Institute of Theoretical Astrophysics (CITA) Fellow

Machine learning with non-linear regression techniques. Wrote and deployed [HMcode](#) software to speed-up calculation time for non-linear spectrum by factor of one million.

Mar 2014–Oct 2015: University of Edinburgh; Researcher

Supervised undergraduate student projects; coordinated, developed and delivered public-outreach program. Published papers on optimal cosmological simulation rescaling solutions.

OTHER INTERESTS

- Enthusiastic skier with total lack of finesse.
- Surfer traumatised by a lifetime of cold waves and water.
- Indoor-wall climber with atrocious technique.
- Ultimately clichéd landscape photographer.