ALEXANDER MEAD

PhD

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🌐 Website
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Experienced lead software engineer, architect, and data scientist looking for the next challenge.

SKILLS

- Team leadership and management (Jira/Agile/Scrum)
- Software architecture
- Cloud-based web development (FastAPI; serverless; Modal)
- AWS (Lambda; EC2; S3; ECR; CloudWatch; SNS; SQS; ...)
- Version control (git; GitHub)
- Continuous integration and deployment
- Python (numpy; scipy; pandas; sklearn; torch)
- Fortran; C
- Machine Learning
- Bayesian Probabilistic Programming
- Deep (neural network) learning
- macOS; Linux; bash

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 lead software engineer 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 cloud-based software development, project/product management, statistical analysis, Bayesian statistics, data visualisation. Interested and experienced in the full product-development cycle. Up-to-date programming and technical skills and able to learn new skills, techniques, frameworks, quickly. Creative, driven, and self reliant.

EXPERIENCE

Mar 2023-Present: Lead Software Engineer; digiLab
Lead a team of ~6 software engineers to build "twinLab", a web-based machine learning app (SaaS) targeting the engineering sector. twinLab is a serverless FastAPI web app that requisitions cloud-based compute in order to train/use statistical machine learning models that robustly quantify internal uncertainty. Lead design and implementation of backend architecture including API, databases, security, and computing.

May 2022–Dec 2022: University of British Columbia; Research Associate in Computer Science
Worked as part of the Programming Languages in Artificial Intelligence (PLAI) group to enhance probabilistic programming with deep-learning. 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 users' mental health based on interactions with an app.

Nov 2020–Jul 2021: University of Edinburgh; GLOBE Fellow
Halo-model software development; undergraduate teaching; review article writing. Utilised machine learning to replace expensive simulations resulting in factor ~1,000 saving in computation time.

Nov 2015–Oct 2020: University of British Columbia and University of Barcelona; CITA/Marie Curie Fellow
Supervised undergraduate and graduate research projects. Developed 'response' theory for cosmological estimators. 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. HMcode was, and remains, the de-facto standard theoretical calculation used in cosmological inference pipelines.

OTHER INTERESTS

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