The Alan Turing Institute

Research Lead - AI for Weather Forecasting

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There has never been a more significant time to work in data science and AI. There is recognition of the importance of these technologies to our economic and social future: the so-called fourth industrial revolution. The technical challenge of keeping our data secure and private has grown in its urgency and importance. At the same time, voices from academia, industry, and government are coming together to debate how these technologies should be governed and managed.
The Alan Turing Institute, as the UK's national institute for data science and artificial intelligence, plays an important part in driving forward advances in these technologies in order to change the world for the better.

The Institute is named in honour of Alan Turing, whose pioneering work in theoretical and applied mathematics, engineering and computing is considered to have laid the foundations for modern-day data science and artificial intelligence. The Institute's purpose is to make great leaps in data science and AI research to change the world for the better. Its goals are to advance world-class research and apply it to national and global challenges, build skills for the future by contributing to training people across sectors and career stages, and drive an informed public conversation by providing balanced and evidence-based views on data science and AI.

After launching in 2015 with government funding from EPSRC and five founding universities, the Institute has grown an extensive network of university partners from across the UK and launched a number of major partnerships with industry, public and third sector. Today it is home to more than 300 researchers, a rapidly growing team of in-house research software engineers and data scientists and a business team.

BACKGROUND

In an era of increasing environmental volatility, weather and climate prediction are crucial for national security and global resilience. These capabilities provide the early warning systems required to protect infrastructure and ensure the security of food, water, and energy. This field is being fundamentally re-engineered by Artificial Intelligence; global weather forecasting AI models are now thousands of times faster than traditional numerical prediction and frequently outperform conventional models in both accuracy and efficiency. Developing sovereign AI capabilities in this space is essential to ensure the UK possesses the independent and trusted tools to manage risk and accelerate decision-making.

ROLE PURPOSE

The Environment Forecasting Mission advances AI-enabled forecasting to deliver practical decision intelligence, protecting people and infrastructure from extreme weather, securing the Arctic, and providing operational climate intelligence for global development and adaptation.

1. **Weather Forecasting for National Security**

Providing critical decision intelligence to anticipate and manage risks from extreme weather, protect people and infrastructure, and support resilient supplies of food, water, and energy.

2. **Sea-Ice Forecasting for Arctic Resilience**

Developing AI-powered sea ice prediction to support safe navigation, protect polar communities and ecosystems, and build situational awareness across a rapidly changing Arctic.

3. **Climate Prediction for Global Development and Adaptation**

Delivering climate intelligence in data-sparse regions to support food security, public health, and climate adaptation in low- and middle-income countries.

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FastNet

One of the projects under this mission is specifically focused on Machine learning Weather Prediction (MLWP). Working in partnership with the UK national meteorological service, the Met Office, the project team have so far developed a machine learning model for weather prediction, 'FastNet'. The ultimate goal of this collaboration is to operationalise the FastNet model with the optimal blend of physics-based and Machine Learning-based modelling for UK weather prediction. Building on initial success with FastNet in global predictions, the partnership will next develop high-resolution regional forecasts for the UK.

You will be encouraged to proactively collaborate with the Turing's Fundamental Research programme, contributing to and drawing from expertise in generative AI, statistical modelling, and physics-informed AI. You will play an active role in developing and integrating spatio-temporal AI approaches specifically applied to physical systems.

We are seeking a highly skilled, experienced Research Lead to drive forward the collaboration. The individual will need to have an expertise in machine learning, preferably with experience of application in weather or climate prediction. The primary purpose of this role is to lead a team of researchers to conduct internationally leading research and ensure effective pull-through towards impact. This will be a collaborative, multidisciplinary team, working across the Turing and the Met Office to bring the research to deployment. You are expected to engage with internal and external stakeholders and collaborators to manage research progress.

The Research Lead role will be part of the Environment & Sustainability Grand Challenge, and you will be reporting to the Mission Director and work closely with other (Senior) Research Associates and Research Software Engineers within the same area. You will be required to manage a small group of (Senior) Research Associates and other early-career members of the team including students. We'll aim to keep this post focused on FastNet however, due to business needs, your focus may be moved to other projects if needed.

HOW YOU WILL MAKE AN IMPACT

- Manage and lead a team of researchers and professional staff to develop and deliver high-quality high-impact research.
- Ensure research project delivery against objectives within allocated budgets and timeframes and ensure efficient management of resources.
- Lead a team of researchers and research software engineers to develop the FastNet MLWP model.
- Take the lead on writing up findings as they emerge, producing and developing reports, and publications in peer-reviewed journals, in collaboration with the research team.
- Lead on the preparation of proposals and applications to external bodies, e.g., for funding and contractual purpos es.
- Present, disseminate and explain our work at meetings/events and contribute to both the internal and external visibility of the Institute.
- Take responsibility for driving collaboration with academic experts and broader research partners from across the Turing, and the wider Turing / project community.
- Line manage staff within the theme, supporting their career development aspirations.
- Contribute to the life of the Institute and support diverse and inclusive community through embracing the Turing values.
- Adhere to and promote principles of reproducible and ethical data science and ensure secure handling of data and health and safety in all aspects of work.
- Engage with stakeholders to ensure that research outcomes can be deployed in the real world.

OTHER DUTIES

- Travel may be necessary to meet the requirements of the role.

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Please note that job descriptions cannot be exhaustive, and the postholder may be required to undertake other duties, which are broadly in line with the above key responsibilities. This job description is written at a specific time and is subject to changes as the demands of the Institute and the role develop.

PERSON SPECIFICATION		
Skills and Requirements Post holders will be expected to demonstrate the following:	**Essential (E)** **Desirable (D)**	**Tested at application (a)** **Tested at interview (i)**
A strong track record and experience in a relevant area, e.g., machine learning, AI, computer science, mathematics, statistics, physics, engineering, environmental science	E	A
Experience in machine learning, programming	E	A, I
Experience in modelling of complex environmental systems	E	A, I
Evidence of leading grant applications and securing external funding	E	A
Proactive approach to managing stakeholders and their requirements and identifying opportunities for collaboration	E	A, I
Excellent written and verbal communication skills including the ability to present complex or technical information, and to communicate effectively with diverse audiences	E	A, I
Ability to initiate, plan and prioritise research projects and ensure effective use of research resources	E	I
Commitment to EDI principles and to the Organisation values	E	A, I
Wiling to seek opportunities to make improvements and be proactive in identifying sources of funding/income	D	A, I

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APPLICATION PROCEDURE

If you are interested in this opportunity, please click the apply button below. You will need to register on the applicant portal and complete the application form including your CV and covering letter.

Your supporting statement should focus on the following criteria:

- Experience in machine learning, programming
- Experience in modelling of complex environmental and/or sustainability systems
- Substantial research experience in their field of expertise with commensurate output
- Evidence of high-quality publication(s) in a relevant field commensurate with your career stage (publication list if not detailed in your CV)
- Ability to carry out research independently and take the lead on research direction in collaboration with the PIs
- A statement on how you see machine learning for environmental modelling changing over the next 3 years

If you have questions about the role or would like to apply using a different format, please contact us at recruitment@turing.ac.uk.

CLOSING DATE FOR APPLICATIONS: SUNDAY 31 MAY 2026 AT 23:59 (LONDON, UK, BST)

TERMS AND CONDITIONS

This full-time post is offered on a fixed term basis for 3 years. Part-time (0.8 FTE) applications can be considered. The annual salary is £66,482 - £72,000 plus excellent benefits, including flexible working and family friendly policies, Employee-only benefits guide | The Alan Turing Institute

The Alan Turing Institute is based at the British Library, in the heart of London's Knowledge Quarter. We expect staff to come to our office at least 4 days per month. Some roles may require more days in the office; the hiring manager will be able to confirm this during the interview.

EQUALITY, DIVERSITY AND INCLUSION

The Alan Turing Institute is committed to creating an environment where diversity is valued and everyone is treated fairly. We value diversity of background, experience, and perspective, and are proud to be an inclusive employer. We warmly encourage applications from all backgrounds, particularly from groups currently under-represented in our sector. If you feel passionate about this role but don't meet every single requirement, please apply — we recognise that great candidates may bring strengths beyond the criteria listed.

We are committed to making sure our recruitment process is accessible and inclusive. This includes making reasonable adjustments for candidates who have a disability or long-term condition. Please contact us at recruitment@turing.ac.uk to find out how we can assist you.

Please note all offers of employment are subject to obtaining and retaining the right to work in the UK and satisfactory pre-employment security screening which includes a DBS Check.

Full details on the pre-employment screening process can be requested from HR@turing.ac.uk***.***

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OUR VALUES

The Alan Turing Institute is committed to equality diversity and inclusion and to eliminating discrimination. All employees are expected to embrace, follow and promote our EDI Principles and Our Values.