Research Fellow for Safe and Ethical AI, AI Programme

THE ALAN TURING INSTITUTE

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 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 goals are to undertake world-class research, apply its research to real-world problems, driving economic impact and societal good, lead the training of a new generation of scientists, and shape the public conversation around data and algorithms.

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 500 researchers, a rapidly growing team of in house research software engineers and data scientists and a business team.

BACKGROUND

At The Alan Turing Institute, the AI programme's goal is to advance world-class research into artificial intelligence, its applications and its implications for society, building on the wealth of expertise and knowledge across our academic network.

Our programme expertise draws on the cross-disciplinarity at the heart of the Turing; bringing together technical experts to forge ahead with breakthroughs in fundamental AI research and its applications, with social scientists, ethicists, legal experts, industry, and policy-makers who are considering the implications of AI in real-world applications.

The programme will contribute to leadership around this area, drawing on our links with industry and government to help ensure that the UK remains at the forefront of scientific innovation while building an ethical and regulatory framework for the use of AI that prevents misuse and inappropriate discrimination.

Our aim is to build a leading centre of excellence for technical work on safe and ethical AI, in line with the government's Industrial Strategy and in step with global demand for research and guidance in this domain.

ROLE PURPOSE

We are seeking a full-time established academic as a Research Fellow (RF) to work as part of the AI Programme, on one or more of the following themes of the Turing Safe and Ethical AI activities:

- Fairness – including measuring and mitigating inappropriate bias against subgroups.
- Transparency and Interpretability - improving our understanding of how algorithmic systems operate with a view to their applications in the real world.
- Robustness - aiming to ensure reliably good performance (e.g. within quantifiable uncertainty bounds), even when encountering different settings from those in which a system was trained.

These areas require deep theoretical research, looking for rigorous, quantifiable and verifiable guarantees. Work might involve approaches such as modelling uncertainty or causal reasoning.

We are looking for ambitious, strong researchers to contribute to these areas. A key consideration is how we can try to ensure good performance not only of the AI system, but human-machine teams. Hence, experience and expertise in HCI or related areas will be beneficial.

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Applicants with strong theoretical and/or applied backgrounds are welcome. We recognise that in real-world settings, there will often be interdependencies and tensions among the above goals and performance. In order to make constructive progress, we will examine settings in context, working with practitioners and domain experts. Application domains will likely include healthcare, criminal justice and finance.

It will be vital to interface well with other disciplines, policy makers, industry and the public – but we expect the primary contributions of those hired to be technical. Successful candidates will work as part of the AI Programme, alongside Adrian Weller, Ricardo Silva, Yarin Gal and other Turing researchers.The Institute is interdisciplinary in its approach and includes lawyers, ethicists, social scientists and humanities researchers in addition to researchers in technical disciplines and collaboration is encouraged. The Institute maintains a team of full-time data engineers to support prototype development.

This is an exciting opportunity to develop strong technical underpinnings while engaging with real-world practitioners, broader stakeholders and policy makers.

DUTIES AND AREAS OF RESPONSIBILITY

Duties and Responsibilities

- To develop a research programme at the Turing and conduct outstanding, creative and innovative research in Safe and Ethical AI, to develop internationally-significant outcomes through high-impact publications.
- To collaborate with others across the Turing, university partners, industry partners, other collaborators and the community beyond, towards outputs and outcomes that yield significant academic, societal or economic impact.
- To travel as necessary to present work and meet with external collaborators.
- To play a role in advancing the Turing's AI programme.

Other duties

- Teaching may be required as part of collaboration work.

We welcome and develop applicants from diverse backgrounds, experiences and ideas and encourage applications from individuals who may have had non-traditional career paths, who may have taken a career break or who have achieved excellence in careers outside of academia.

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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)
Education/Qualification		
A PhD that is relevant to a technical aspect of Safe and Ethical AI or an equivalent, demonstrated sustained intellectual leadership, in a technical area of relevance.	E	(a)
Knowledge and Experience		
Demonstrated sustained intellectual leadership in a technical area of relevance.	E	(a)&(i)
Evidence of commitment, passion and vision in a technical aspect of Safe and Ethical AI.	E	(a)&(i)
Demonstrated understanding of the national and international research landscape across AI disciplines and/or domains.	E	(a)&(i)
Expertise in work in Fairness, Transparency or Robustness.	E	(a)&(i)
Expertise in HCI or related areas.	D	(a)&(i)
Interest and/or knowledge of healthcare or criminal justice or finance.	D	(a)&(i)
Track record of obtaining funding to support research.	D	(a)&(i)
Track record of outstanding research and in delivering impact.	E	(a)&(i)
Strong awareness of the international context of the research.	E	(a)&(i)
Evidence of outstanding approach to identifying future research directions in AI.	E	(a)&(i)
Experience in translating research output into prototype tools.	D	(a)&(i)
Communication		
Excellent written and verbal communication skills, including experience in publishing research papers or technical reports at top venues, and giving presentations or classes on technical subjects.	E	(a)&(i)
Teamwork and Motivation		
Demonstrated ability to develop, lead and support a successful research team and maximise the potential in others.	E	(a)&(i)
Liaison and Networking		
Ability to create and promote a collegiate, inclusive and collaborative approach to interdisciplinary research activities.	E	(i)

Undertakes active collaboration with a range of contacts to pursue a shared interest and promotes a positive image of theInstitute .	**E**	**(i)**
Promotes outside engagement, collaboration across programmes and externally.	**E**	**(i)**
Networks with others with shared interests, collaborating on projects and strengthening future relations.	**D**	**(i)**
Leads and develops internal networks, such as working groups or committees in order to deliver collaborative and cross functional projects or initiatives.	**D**	**(i)**
Holds a senior role on an external committee/working group in order to build relationships between external bodies.	**D**	**(i)**
Service Delivery		
Ability to keep accurate and up to date knowledge of services available in own and related areas of work.	**E**	**(a)/(i)**
Ability to work across the Research Team/Programme, to contribute and assist in a number of research activities.	**E**	**(i)**
Ability to adapt services and systems to meet the requirements and identify ways of improving standards.	**E**	**(i)**
Collates feedback and views from the network and keeps up-to-date with market trends to promote research development and make relevant changes.	**D**	**(i)**
Analysis and Research		
Ability to develop new hypotheses and concepts for testing to expand or extend existing body of knowledge.	**E**	**(a)/(i)**
Challenges the status quo and provides mechanisms and approaches to explore new possibilities or explanations.	**E**	**(a)/(i)**
Teaching and Learning		
Teaching may be required as part of the role	**E**	**(i)**
Other Requirements		
Commitment to meeting deadlines	**E**	(a**)/(i)**
Flexible attitude towards work	**E**	**(i)**
Commitment to EDI principles and to the Organisation values	**E**	**(i)**

Please note that job descriptions cannot be exhaustive, and the post-holder 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.

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 Rules of the Game

Respect – We treat everyone with respect, dignity and kindness and acknowledge the experiences, skills and contributions of others.
Trust - We communicate openly and honestly to support an environment where we have trust in each other.
Transparency – We seek to ensure that everyone understands the how and the why of our decisions and actions. We take on board to feedback when those decisions are challenged.
Inclusivity – We are committed to continuously learning how to be more inclusive by listening to those facing barriers.
Leadership – We recognise creating an inclusive, diverse and equitable institute requires leadership from all. We stand up and speak out when change is needed.
Integrity – We recognise that how we work is as important as our outputs and seek to exemplify best practice in all our decisions.

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, covering letter and contact details for your referees. If you have questions about the role or would like to apply using a different format, please contact them on 0203 862 3340, or email recruitment@turing.ac.uk.

CLOSING DATE FOR APPLICATIONS: 24 January 2021 at 23:59.

TERMS AND CONDITIONS

This full-time post is offered on a 2 year fixed-term basis with the possibility of extension. The start date is October 2021 or earlier if possible. The annual salary is £46,000-£50,000 plus excellent benefits, including flexible working and family friendly policies, https://www.turing.ac.uk/work-turing/why-work-turing/employee-benefits

EQUALITY, DIVERSITY AND INCLUSION

The Alan Turing Institute is committed to creating an environment where diversity is valued and everyone is treated fairly. In accordance with the Equality Act, we welcome applications from anyone who meets the specific criteria of the post regardless of age, disability, ethnicity, gender reassignment, marital or civil partnership status, pregnancy and maternity, religion or belief, sex and sexual orientation.

Reasonable adjustments to the interview process will be made for any candidates with a disability.

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***.***