

The Alan Turing Institute

Research Associate, Trustworthy Digital Identity

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 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 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

This role sits within the Finance and Economics Programme at the Institute and the particular project this role will be involved in is the Trustworthy Digital Infrastructure for Identity project. This role works closely with the Principal Investigators on this project, the Technical Development Manager and other PDRA s and programme management staff on the team.

ROLE PURPOSE

The provision of digital infrastructure for identity systems is an emerging requirement in many modern societies across the developed and developing world. New techniques for deployment at scale promise to improve the assurance of users' rights to access to various digital and physical resources, in a cost effective and efficient manner. However, protecting citizens' rights when such systems are deployed requires the development of novel and appropriate socio-technical interventions that incorporate robust security and privacy measures.

We are seeking a candidate for a research position that involves developing explainable AI techniques to support the trustworthiness of identity systems. The successful candidate will have experience of developing and analysing explainable AI algorithms. Understanding of their application in the field of biometrics would be beneficial. You will have experience/knowledge of research that have been used to address known problems such as bias and transparency.

You will collaborate with a small specialist team investigating areas pertinent to establishing trustworthiness within digital identity infrastructure. You will report to a senior principal investigator who will support your efforts throughout the project. For more project background go to the project webpage <https://www.turing.ac.uk/research/research-projects/trustworthy-digital-infrastructure-identity-systems>.

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DUTIES AND AREAS OF RESPONSIBILITY

- Develop and apply state-of-the-art robust machine learning methodologies to tackle business-inspired research challenges of the Turing partnerships using techniques such as
- Scope, pilot and deliver high quality research activity under the Direction of the Principal Investigator and Programme Director:
- Drive collaboration with academic experts and broader research partners from across the Turing and the wider Turing community
- Publish and disseminate high-quality research papers and publications detailing research output and project case-studies.
- Become part of the broader partnership team and be expected to engage on a regular basis with the partner.

Other duties:

- Present, disseminate and explain our work at internal and external events hosted by Turing and/or the partner.
- Contribute to the life of the Institute and support its community.
- To undertake appropriate administration tasks
- Support the Principal Investigator and research group in the design and development of the research programme.

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.

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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		
Research Associate level: PhD in Mathematics, Computer Science or a closely related discipline.	E	A
Research Assistant level: Near completion of a PhD or equivalent level of professional qualification in Mathematics, Computer Science or closely related discipline.	E	A
Knowledge and Experience		
Experience in design, development and implementation of research software tools and libraries, such as Python, Java, GPU programming (Tensorflow, PyTorch, etc), symbolic verification (SAT, SMT)	E	A&I
Ability in mathematical or quantitative methods	E	A, I
Experience in publishing research papers, code libraries or technical reports and giving presentations or classes on technical subjects.	E	A/I
Ability to create and promote a collegial and collaborative approach to interdisciplinary research activities.	D	A/I
Track record of the ability to initiate, develop and deliver high quality research aligned with the research strategy indicated by the PI and any industrial stakeholders and to publish in peer reviewed journals and conferences.	E	A&I
Communication		
Excellent writing skills and proven ability to communicate complex, specialist or conceptual information/research findings clearly and persuasively to diverse audiences, including the ability to explain technical concepts to technical and non-technical audiences.	E	I
Ability to write research reports and papers in styles accessible to both academic and lay audiences.	D	I
Analysis and Research		
Ability to organise working time, take the initiative, and carry out research independently, under the guidance of the PI	E	I
Ability to use own judgement to analyse and solve problems	E	I
Liaison and Networking		
Participates in networks within the organisation or externally to share knowledge and information in order develop practice or help others learn	E	A/I

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Decision Making Processes and Outcomes		
Independently makes decisions which are low risk and that mainly affect themselves or a small number of people and are guided by regulation and practice.	E	A/I
Other Requirements		
Commitment to meeting deadlines	E	I
Flexible attitude towards work	E	I
Commitment to EDI principles and to the Organisation values	E	I
The post holder may be required to travel within the UK and internationally.	D	I

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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.

Our values

- Trust**
We create an environment where we have trust and can be trusted
- Inclusivity**
We expect our Turing community to contribute to a culture that is inclusive and free of barriers
- Respect**
We all have different roles, priorities and challenges but our shared purpose is the same
- Leadership**
Leadership is everyone's business; Turing leaders set the right tone and lead by example
- Transparency**
Everyone should understand the how and the why of our decisions and actions
- Integrity**
We are all ambassadors for the Turing's mission of changing the world for the better

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. If you have questions about the role or would like to apply using a different format, please contact us on 020 3862 3575 or 0203 862 3340, or email recruitment@turing.ac.uk.

CLOSING DATE FOR APPLICATIONS: 14 August 2022 at 23:59

TERMS AND CONDITIONS

This full-time post is offered on a fixed-term basis until 31 December 2023. The annual salary is £38,850 - £46,200 plus excellent benefits, including flexible working and family friendly policies, <https://www.turing.ac.uk/work-turing/why-work-turing/employee-benefits>

Candidates who have not yet been officially awarded their PhD will be appointed as Research Assistant at a salary of £36,236 per annum.

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.

We are committed to building a diverse community and would like our leadership team to reflect this. We therefore welcome applications from the broadest spectrum of backgrounds.

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.