

The Alan Turing Institute

Research Associate in Privacy, Security and Trust for Human Rights

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

The Institute has a focused area of work on AI, Human Rights and Inclusion which considers different dimensions to the intersection of AI and human rights including: how AI and related technologies can be applied to address global challenges of human rights; how diverse perspectives can inform in the AI lifecycle (including design, data curation and sharing) to safeguard human rights (e.g., privacy, non-discrimination); and how EDI can be improved across the AI lifecycle, ecosystem and environment to support equitable, just and inclusive societies.

One of the application areas includes a programme of research activities to understand and enable the data ecosystem and application of data science and AI technologies to address modern day slavery challenges for policy-makers and front-line agencies. The research activities have been and are informed by and in collaboration with stakeholders across public, private, non-profit and IGO sectors. The modern slavery specific work is cross-cutting supported through a mixture of internal and external partnerships and funding sources: The Institute is a partner in the Modern Slavery and Human Rights Policy Evidence Centre (herein Modern Slavery PEC) and the Institute's AI for Science and Government (ASG) Programme, Defence & Security Programme, and Finance Programme. The programme of research activities leverages expertise of Project leaders from across the Institute and its University partners. The project involves a multi-disciplinary team with Project Investigator team including: Anjali Mazumder, Jat Singh, Jennifer Cobbe, Carsten Maple, Mihai Cuccuringu.

ROLE PURPOSE

We are looking for an early career researcher with knowledge in approaches to data sharing, management, processing and machine learning with strong privacy guarantees. The aim of this role is to (a) consider issues of privacy, security and trust as they relate to data sharing and curation of multiple sensitive data sets sourced across sectors and borders for given case studies, (b) conduct research in development and application of privacy and security related research including data anonymisation and synthetic data generation, differential privacy, federated learning, and other related technologies as it relates to case studies, and (c) develop socio-technical approaches and frameworks to enable privacy, security and trust in the data sharing and application of ML to sensitive datasets. The role requires engaging with domain experts and stakeholders across law enforcement, government, NGOs and the private sector.

This role is suitable for someone who is interested in bringing their strong technical expertise to human rights applications. We invite you to join us as we grow our research capability, supporting our goal to develop the next generation of data

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science researchers to push the boundaries of how we design and conduct data science and AI for human rights and humanitarian action. The post-holder will report to the Project Investigator Jat Singh.

DUTIES AND AREAS OF RESPONSIBILITY

- Conduct high quality research at the intersection of privacy and machine learning as relevant to the project
- Ensure validity and reliability of methodological developments and analysis, maintaining accurate and complete records of all findings
- To lead on any software development and engineering activities, including prototyping, to support the research aim
- Take initiative and make original contributions to the research project programme to the success of the research programme as a whole
- Collaborate with stakeholders and partners on research and identifying opportunities to take developed methods towards wider use.
- Assist in the organisation of and participate in regular meetings and special workshops with the research team, designated members of staff, collaborators and stakeholders
- Write and publish articles in peer-reviewed journals that highlight findings from research ensuring consistency with the highest standards of academic publication, and draft publications for other mediums such as blogs, briefs and explainers, showcasing the Institute's research leadership
- Present methods and results at conferences and workshops, and communicate results to a diverse audience.
- To work in close co-operation with the Project Investigators, collaborators and stakeholders

OTHER DUTIES

- Travel as necessary to meet with internal and external collaborators.

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	Essential (E)	Tested at application(A)
	Desirable (D)	Tested at interview (I)
Post holders will be expected to demonstrate the following		
Education/Qualification		
PhD Degree involving privacy analysis or machine learning, or equivalent level of professional experience.	E	A
Knowledge and Experience		
Experience in a range of privacy preserving methods	E	A/I
Experience in modelling and data analysis, incl. synthetic data generation	E	A/I
Knowledge in challenges and opportunity in data collection, data sharing, data infrastructures	E	A/I
Knowledge and experience in open-source software development and engineering	E	A/I
A good knowledge of different database and storage infrastructures	D	A/i
Significant experience of using a modern statistical programming language (such as R or Python)	D	A/I
A level of scientific comprehension sufficient to conduct relevant literature reviews.	E	A/I
Experience in coordinating multiple streams of work and collaborators	D	A/I
Ability to critically evaluate findings and derive evidence-driven conclusions.	E	A/I
Ability to critically assess risks or harms of data and technology use on marginalised communities	D	A/I
Experience or understanding of AI designed for social good challenges, e.g. conflict, climate change, modern slavery, racialised and minority communities	D	A/I
Experience of working in multi-disciplinary teams	D	A/I
Ability to act as an ambassador for the development and implementation of new tools for policy and operational practice.	D	A/I
Communication		
Possess excellent written and verbal communication skills with the ability to adapt to different audiences, as appropriate	E	A/I
Ability to negotiate and influence others	E	A/I
Liaison and Networking		
Ability to work as a member of a team.	E	A/I
Participate 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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Network with others with shared interests, collaborating on projects and strengthening future relations.	E	A/I
Project Management & Project Delivery		
Ability to work flexibly, prioritising tasks to meet deadlines and maintaining a high standard of accuracy and attention to detail.	E	A/I
Proactive approach to managing stakeholders and their requirements and identifying opportunities for collaboration.	E	A/I
Adapts services and systems to meet stakeholders' needs and identifies ways of improving standards. Learns from issues and takes action to resolve them.	E	A/I
Decision Making		
Ability to lead own work Independently, and make independent decisions which are low risk and that mainly affect themselves or a small number of people.	E	A/I
Recommend and advise on available options for decisions that affect operational processes, taking into account any risks.	E	A/I
Work with others to make collaborative decisions that may be operational or strategic which may impact the immediate team or work area.	E	A/I
Initiative and Problem Solving		
Uses judgement to analyse and solve problems, and take action to prevent recurrence of problems.	E	A/I
Ability to make recommendations offering wider benefits, using evidence to support	D	A/I
Ability to deputise PI/Co-Is/represent leadership and support programme portfolio	E	A/I
Analysis and Research		
Experience supporting research including desk-based literature review, content analysis and summary, and compiling and formatting bibliographic material;	E	A/I
A demonstrated interest in the mission of the Alan Turing Institute, and in exploring the real-world impact of cutting-edge technology.	E	A/I
Ability to organise working time, take the initiative, and carry out research independently, under the guidance of the PI.	E	A/I
Other Requirements		
Commitment to EDI principles and to the Organisation values	E	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 3970 2148 or 0203 862 3340, or email recruitment@turing.ac.uk.

TERMS AND CONDITIONS

This full-time post is offered on a fixed term basis for 2 years. 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.

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.