

The Alan Turing Institute

Research Assistant / Research Associate, Remote Onboarding Framework

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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 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 successful candidate will work on the [Trustworthy Digital Infrastructure for Identity Systems](#) project. They will work closely with the Principal Investigators, the Technical Development Manager, other PDRAs and programme management staff across the team.

The project and role sit within the [Finance and Economics Programme](#) which brings together leading experts in data science, machine learning, finance and the social sciences, from both academia and industry to tackle the most challenging questions by producing world-leading research with significant impact. The programme works closely with government and the industry to exploit the potential of new technologies in the financial sector and economic research, and to position the UK as the leader in these areas. The programme is led by the Programme Director, Lukasz Szpruch.

ROLE PURPOSE

Many developing economies suffer from the issue where citizens cannot access formal identity¹. To overcome this issue introducers are used to formally vouch for a citizen that they know but who has no way of proving who they are. The introducer will travel to the onboarding centre with the citizen so that they can be committed to the identity system and gain access to the benefits that this provides. The alternative is where the onboarding 'centre' travels to remote communities that has a concentration of citizens with no formal identity, but does have at least one trusted person that can act as an introducer. Both solutions unfortunately are expensive and logistically problematic.

The purpose of this research is to explore the opportunities of crowd sourcing the onboarding of citizens onto a country's digital identity system to persons of authority within the community. The goal is to provide the means whereby the introducer can use a mobile device and follow a process that enables self-verification and for them to also provide witness to the citizen's existence. This process will support the capturing of some level of biometrics in the process which could be sufficient to provide a full, or provisional, identity for the citizen. This project will explore the risks to the process and the

¹ Exclusion and identity: life without ID. Available at: <https://www.privacyinternational.org/long-read/2544/exclusion-and-identity-life-without-id>

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individuals, it will also address anomaly detection methods to determine inappropriate behaviours in the onboarding process. Outputs will include prototype code that supports the verification of the proposal and how it will be implemented.

Role deliverables

- A framework that enables remote onboarding for citizens with no formal identification
- A prototype that demonstrate the end-to-end process
- Final report and publication on process / findings

DUTIES AND AREAS OF RESPONSIBILITY

- 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.
- 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 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.

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PERSON SPECIFICATION		
Skills and Requirements	Essential (E) Desirable (D)	Tested at application (a) Tested at interview (i)
Post holders will be expected to demonstrate the following:		
Education/Qualification		
Research Assistant: Near completion of higher degree or equivalent level of professional qualification in Mathematics, Computer Science or closely related discipline.	E	A
Research Associate: PhD in Mathematics, Computer Science or a closely related discipline, or equivalent level of professional experience	E	A
Knowledge and Experience		
Experience of developing biometrics for mobile applications.	E	A, I
Knowledge of issues of exclusion, privacy, fraud and risk in identity systems.	E	A, I
Track record of programming and software development.	E	A, I
Experience in publishing research papers, code libraries or technical reports and giving presentations or classes on technical subjects.	D	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 written and verbal communication skills with the ability to clearly communicate complex, specialist or conceptual information/research findings clearly and persuasively to diverse audiences. This will include 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.	E	I
Teamwork and Motivation		
An ability to collaborate successfully in a multidisciplinary environment across different levels of seniority	E	A, 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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Planning and Organising		
Ability to work flexibly, prioritising tasks to meet deadlines and maintaining a high standard and attention to detail.	E	A,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
Other Requirements		
Commitment to meeting deadlines.	E	I
Flexible attitude towards work.	E	I
The post holder may be required to travel within the UK and internationally.	D	I
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.

CLOSING DATE FOR APPLICATIONS: 07 February 2023 at 23:59

TERMS AND CONDITIONS

This full-time post is offered on fixed term basis for 6-months from the date of appointment (possibility of extension). The successful candidate must be in post no later than 01 June 2023. Research Assistants will be appointed at an annual salary of £36,236. The salary range for Research Associates is £38,850 - £46,200.

This offer includes our 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.