

The Alan Turing Institute

Senior Research Associate, Tools Practices & Systems

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 [Tools, Practices and Systems](#) (TPS) research programme at the Turing represents a cross-cutting set of initiatives that seek to build open source infrastructure that is accessible to all and to empower a global, decentralised network of people who connect data with domain experts.

[The Turing Way](#) is an open source community-driven guide to reproducible, ethical, inclusive and collaborative data science. The project goal is to provide all the information that data scientists in academia, industry, government and the third sector need at the start of their projects to ensure that they are easy to reproduce and reuse at the end. To date, 400+ contributors have collaborated to develop chapters and resources on data science, which are available as an online book with five guides on reproducibility, project design, communication, collaboration, and research ethics. A community handbook is maintained to document and showcase good practices in open research -- allowing anyone to develop a similar project in data science.

Hosted by the TPS research programme, *The Turing Way* is internationally recognised for influencing data science culture across government, funders, policy, and healthcare sectors. *The Turing Way* team and community members have informed high-profile reports and policies, as well as serve as core advisors and leaders on global initiatives around open science and reproducibility, led by several international organisations. To directly enhance impact and expertise by embedding best practices into organisations leading data science and AI research, **The Turing Way is establishing a Practitioner's Hub**. *The Turing Way* Practitioners Hub can only achieve - and communicate - its ambitious goals if it is delivered by involving and supporting domain experts from different sectors (such as academia, industry, government, research organisations and the public) applying data science. In the initial stage, the Practitioners Hub will establish strategic collaboration with selected organisations in the UK operating across research, engineering systems, government and healthcare sectors to build case studies, enable cross-sector exchange and accelerate the adoption of industry best practices for data science. The full proposal is available online: <https://doi.org/10.5281/zenodo.7427273>.

We are recruiting a Senior Research Associate to lead collaborative research and strategic development of its newly funded Practitioners Hub. The post holder will act as a bi-directional conduit to implement best practices for reproducible, ethical, inclusive and collaborative data science in the Practitioners Hub and the broader open research communities working adjacent to *The Turing Way*.

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ROLE PURPOSE

The Senior Research Associate will lead collaborative and interdisciplinary research for *The Turing Way* Practitioners Hub. They will design, conduct and communicate community-based research facilitating cross-sector exchange and adoption of research best practices in alignment with *The Turing Way* goals.

They will be leading the delivery of the Practitioners Hub alongside the project leads, and create equitable opportunities for everyone to share best practices openly. They will support representatives from participating organisations to share and promote the skills from their respective sectors, as well as identify what collaborators from a range of diverse backgrounds need to effectively work together. They will identify areas of implicit knowledge and expertise within *The Turing Way* Practitioners Hub and make this information explicit so that everyone interested can effectively collaborate with each other and identify opportunities to transfer knowledge from one sector to another.

We do not expect the applicants to already have all the skills within the scope of *The Turing Way* project. Rather that they will develop new expertise and grow in the role. They will also participate in the Tools, Practices and Systems programme, particularly in the development of responsible research and innovation practices. We expect that success in the role will also require close collaboration with other communities across The Alan Turing Institute.

The post holder will work closely with TPS Programme Director and *The Turing Way* lead Kirstie Whitaker, project co-lead and TPS Senior Researcher - Open Research, Malvika Sharan, *The Turing Way* Community Manager, Anne Lee Steele, and the TPS programme management team. They will also closely collaborate with other TPS Senior Researchers, Community Managers and Research Applications Managers at the Alan Turing Institute. Malvika Sharan will be their line manager.

Through collaboration with the BridgeAI project, we also seek to adapt and extend the impact of The Turing Way resources to sectors with lower data science and AI uptake. All our activities will be delivered in close alignment with the Turing's Partnerships and Skills teams.

DUTIES AND AREAS OF RESPONSIBILITY

- **Conduct community-based research** that engages the Practitioners Hub stakeholders in high-quality interdisciplinary and collaborative ways, enabling documentation, knowledge exchange and transfer of best practices from across different sectors, while working openly and reproducibly with qualitative data. This will include but is not limited to:
 - scoping and identifying research questions, designing the data collection process and applying for ethics approval applications for the Practitioners Hub.
 - Drawing practices from [ethnographic methods](#) consisting of participant observation, interviews, documenting the narratives, activities, and processes, and carrying out qualitative analysis giving insights on industry best practices from different sectors.
 - Setting up data handling and management plans, maintaining transparency in the method selection, carrying out data analysis and ensuring data protection for sensitive information.
 - Implementing and building on practices in *The Turing Way* (see the [Community Handbook](#)) – and across the open source ecosystem – to ensure that the Practitioners Hub stakeholders can identify, adopt and enhance resources on reproducible, ethical, inclusive and collaborative data science relevant for their work.
 - Publish - as a lead or co-author - peer-reviewed research articles, open source training curricula, and/or perspective, opinion and commentary articles, as appropriate. This responsibility will be aligned with the successful candidate's expertise, career goals and line of research in the context of this project.
- **As a part of the project's leadership and management team**, lead on strategic engagement, foster collaboration and facilitate knowledge exchange within the Practitioners Hub. This will include but is not limited to:

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- Catalyse connections and collaboration between researchers, industry and government data scientists, policymakers and contributors to *The Turing Way*. This could come in the form of synchronous regular meetings or it could occur asynchronously, for example, through active engagement on distributed communication channels such as Slack and the maintenance of public and private GitHub repositories to document ongoing work.
- Onboard and collaborate with representatives (“experts in residence”) from stakeholder organisations. This will include running 1:1 consulting, interviewing and collaboratively building documentation such as domain-specific case studies.
- Design, organise and facilitate innovative, inclusive events - remote and in-person - for all Practitioners Hub collaborators. These can include small group-focused meetings such as informal catch-up and formal discussions, skill-building and training workshops, collaborative contribution events such as hackathons, documentation sprints, or design scoping workshops.
- Create timely reports and/or chapters in *The Turing Way* to ensure that resources remain accessible for all participants of the Practitioners Hub as well as the wider research community.
- Identify opportunities for and collaborate with experts in the Turing institute and the existing partners as well as future partnering organisations of *The Turing Way*.
- **Work with the Research Application Manager** to establish new collaborations, contributing to building future strategy and accelerating the adoption of The Turing Way practices across sectors. In doing so, scan the landscape and horizon for crucial pieces of information about national and international priorities in data science skills, areas of focus by public sector, private sector and third sector organisations, and how either these sectors already use *The Turing Way* or have the potential to adopt practices from *The Turing Way*.
- **Work with *The Turing Way* Community Manager** to curate relevant resources from *The Turing Way* and the wider open science ecosystem, ensure regular communication between *The Turing Way* and the Practitioners Hub, document processes and identify needs for skills or capacity building. This will likely require identifying training opportunities from within the Turing Academic Engagement and Skills network, as well as proactively offering 'just in time' training, as appropriate.
- **Be an active contributor to *The Turing Way* project** and exemplify the practices we want to promote within the Practitioners Hub. This may include identifying gaps in the current material, writing new content, reviewing existing chapters, giving presentations about the project to new audiences, welcoming members of your own project communities to join *The Turing Way*, and contributing to the design of governance and decision-making processes. We expect all members within the Tools, Practices and Systems Programme to attend regular co-working sessions and participate in discussions on research best practices across a project lifecycle. You will be expected to welcome and support Practitioners Hub's engagement in *The Turing Way* community.
- Communicate technical topics to colleagues and external partners by preparing and presenting reports, and blog posts, organising and delivering presentations, and facilitating events as needed. Communications may be synchronous or asynchronous, remote or in person, and must be prepared at the appropriate granularity of detail for the audience. In doing so, promote the sustainable use of Turing's research outputs by facilitating high-quality analysis, software, reporting documentation and training materials, in collaboration with researchers, developers and domain experts.
- Contribute to the research aims and challenges of the Tools, Practices and Systems programme, and those of the Turing Institute more broadly. Share the responsibility of embedding our ethical values in research processes and outputs, and promoting equitable and inclusive co-creation of data-intensive projects.

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 Post holders will be expected to demonstrate the following:	Essential (E) Desirable (D)	Tested at Application (A) Tested at Interview (I)
Education/Qualification		
PhD in a relevant area or equivalent qualification/level of industry experience.	E	A
Bachelor's degree or a Master's Degree in a discipline which provides a good basis for understanding statistics, data science and programming.	E	A
Knowledge and Experience		
Best practices for producing open, reliable and collaborative research, and reproducible analyses.	E	A/I
Qualitative and/or ethnographic research methods - this involves building an understanding of collecting, handling, analysing and communicating qualitative user experience data.	E	A/I
Open research practices and community-led co-creation or team science approaches.	D	A/I
Contributing to, maintaining and/or leading open source research software projects.	D	A/I
Establishing processes for facilitating multi-stakeholder collaboration.	D	A/I
Facilitating research using sensitive data, including an understanding of information governance requirements.	D	A/I
The ability to initiate, develop and deliver high-quality case studies and documents in collaboration with external stakeholders.	D	A/I
Publishing articles, FAIR data sets, and/or open source software libraries for an academic audience and publishing articles and blog posts for a general audience.	E	A
Publishing white papers or policy briefings for an audience of decision-makers in government, industry or the charity sector.	E	A
Communication		
Excellent communication skills with the ability to present complex information and conceptual ideas to a range of audiences.	E	A/I
The ability to synthesise meta-practices from sector-specific work and create accessible reports for both academic and lay audiences.	E	I
Teamwork and Motivation		
Work as a proactive and collaborative member of the community team, proactively looking for issues or problems, and escalating accordingly.	E	A/I
Ability to develop contacts and research collaborations within the Institute and the wider community.	E	A/I
Project Management & Project Delivery		
Proactive approach to managing stakeholders and their requirements and identifying opportunities for collaboration.	E	I
The ability to initiate, plan, organise and prioritise tasks to meet project deadlines and objectives.	E	I

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Decision Making		
Ability to guide others by presenting options and choices available in projects to inform their decision-making in collaboration with Project Investigators as appropriate to the career stage.	E	I
Initiative and Problem Solving		
Suggests ways of improving working practice and use of resources.	E	I
Creatively solves problems, working both independently and with other team members.	E	I
Considers possible solutions to identify those which offer wider benefits. Obtains evidence to support thinking.	E	I
Analysis and Research		
A developing track record in producing high quality academic publications. Ability to write research reports and papers in styles accessible to both academic and lay audiences.	E	A/I
Able to take the lead on writing up findings as they emerge, producing reports, and developing publications in collaboration with the research team	E	I
Reports findings to the wider community as case studies, blog posts, impact reports or articles and is able to withstand challenges by relying on evidence gathered and processes used for analysis.	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 3862 3533 or 0203 862 3516, or email recruitment@turing.ac.uk.

CLOSING DATE FOR APPLICATIONS: Sunday 12 March 2023 at 23:59

TERMS AND CONDITIONS

This full time post is offered on a fixed term basis for two years. The annual salary is £51,025-£52,500 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 £38,236 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.

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 adjustments@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.