The Alan Turing Institute

Research Application Manager – Turing Research and Innovation Cluster in Digital Twins

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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 Alan Turing Institute and its partners have invested more than £26m in digital twin research and innovation across a range of dynamic projects, including developing foundational theory and applications in the engineering, environmental and social sciences. This represents one of the largest and most exciting portfolios of academic digital twin research and innovation in the UK. To build on this activity, we are now establishing a new Turing Research and Innovation Cluster in Digital Twins (TRIC: DT).

The primary objective of the TRIC: DT will be to democratise access to digital twin technology by providing open and reproducible computational and social tools freely accessible to the UK research and innovation communities. This vision will be achieved by establishing knowledge exchange between a central Turing hub and a network of collaborators across the academic and private sectors.

Research and innovation activity will focus on solving significant societal challenges and generating tangible societal benefits in three interrelated areas:
1. **Environment and sustainability**: predicting and mitigating the negative impacts of climate change.
2. **Infrastructure**: enhancing the efficiency and resilience of critical infrastructure (e.g., energy).
3. **Health**: improving human health and wellbeing.

The Tools, Practices and Systems (TPS) programme at the Turing represents a cross-cutting set of initiatives which 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, set within the Tools, Practices and Systems (TPS) programme 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.

We are recruiting two **Research Application Managers** who will work to embed the expertise in the TPS, Turing Way, and open source communities in the TRIC:DT, and to ensure that research outputs are adopted successfully across multiple domains within academia, government, the charity sector and industry.

Role Purpose

The Research Application Manager (RAM) at the Turing builds and nurtures the connections with users of research outputs and brings back the user perspective to researchers and research engineers. We anticipate that the postholder will need to embody core values of *legacy*, *adaptability*, and *collaboration*, in addition to their commitment to equity and inclusion principles as described in the Turing's Values (see below).

RAMs work in a dedicated team focused on ensuring that research outputs such as open source tools are used successfully and sustainably by external stakeholders. The key goal for the RAMs will be to maximise the interoperability between different TRIC:DT outputs, as well as to ensure that those outputs are easily accessible and practically useful to diverse stakeholders across a broad partner ecosystem.

The postholder will need to be someone who takes the initiative and thrives when given a large degree of autonomy and flexibility. The role has considerable similarity to that of a product manager in a tech firm, but with significant adjustments suited to the research context. RAMs typically work on multiple projects concurrently, and each project will be different in different ways. The postholder will need to understand how their adaptability is a strength that will inspire team members, without undermining a determined perseverance on delivering useful outputs.

There is significant scope for the postholder to develop new skills and grow in the role. We do not expect applicants to necessarily be highly experienced and already have all the skills that are vital for success. We do however expect the postholder to be prepared to learn at pace. We are enthusiastic about people who have a background as open source community managers as they are experts in distributed, decentralised collaboration. As contributing members of *The Turing Way* project, all RAMs will have the opportunity to learn or develop technical software engineering and data management skills, and will be expected to share their expertise in user research and product management to diverse stakeholders.

The postholders will report to TPS Theme Lead for Trustworthy Systems once they are in post, and will work closely with Dr Aida Mehonic, TPS Senior Researcher for Research Applications, Prof Ben Macarthur, Programme Director of TRIC: DT and other members of the leadership team. They will also need to work closely with the TRIC: DT Senior Community Manager and the Ethics Advisor for TRIC: DT once they are in post.

Duties And Areas Of Responsibility

- Drive the Institute's efforts to maximise the impact of the TRIC:DT initiative. Ensure that the outputs of the research process are translated into appropriate real-world implementations and that they are used by stakeholders external to Turing. You will achieve this by engaging with prospective stakeholders, in close collaboration with the researchers and the Partnerships team.
- The means of real-world translation are likely to be highly varied across TRIC:DT, as the research outputs are by design heterogeneous. You will conduct some or all among the following:
    - Identify appropriate potential users of research outputs (in collaboration with, and as approved by, the project PIs).
    - Take ownership of the stakeholder engagement strategy.
    - Conduct user research, for example through user interviews or focus groups.
    - Work closely with the research teams to represent and advocate for user needs.
    - Identify challenges that potential users have in deploying research outputs and co-create solutions as an active member of the research team.
    - Facilitate project scoping discussions between researchers and stakeholder organisations.
    - Promote the sustainable use of research outputs by facilitating high-quality analysis, modelling and reporting documentation, and training materials, in collaboration with researchers, developers and domain experts.
    - In collaboration with the TRIC: DT Senior Community Manager, connect with relevant open source communities to raise awareness of and get feedback on the TRIC: DT processes and infrastructure.
- Catalyse connections and collaboration between users and researchers. 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/GitLab repositories to document ongoing work within the projects.

- Be an active community member of *The Turing Way* project. This may include writing new content, reviewing existing chapters, or giving presentations about the project to new audiences. We expect all RAMs to attend regular co-working sessions and participate in discussions on research best practices across a project lifecycle.

- Build connections between TRIC: DT researchers and the Institute's Research Engineering Group and the Skills Team.

- Work with the Turing Communications team to promote achievements and capabilities in a way which is meaningful for stakeholders across relevant sectors.

- Communicate technical topics to colleagues and external partners by preparing and presenting reports, blog posts, organising and delivering presentations, and taking an active role in meetings and discussions. Communications may be synchronous or asynchronous, remote or in person, and must be prepared at the appropriate granularity of detail for the audience.

- 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 defined to be aligned with the successful candidate's personal career goals, through collaborative discussion when they are in post.

- 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.

We note that job descriptions cannot be exhaustive, and the postholder may be required to undertake other duties, in response to business requirements and as part of a fast evolving organisation. Additional tasks will be broadly in line with the above key responsibilities, and all changes will be collaboratively defined as part of regular performance review opportunities. 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 or equivalent 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		
Experience in stakeholder engagement, for instance, experience working with consortium partners, research collaborators, delivery partners, or clients.	E	A/I
Experience with basic coding skills in any programming language.	E	A/I
Experience in: • Product management through a developmental lifecycle, • Research and/or development in data science, • Data engineering for reproducible analysis and/or deployment, • Community management (for instance, in open source), • Git for version control and Github or GitLab for project management, • Public policy and governance • Data ethics or responsible research and innovation	D	A/I
Knowledge of, or interest in learning about reproducible research	E	I
Track record of delivering value for an organisation or stakeholder through use of data science, data visualisation or software engineering.	D	A/I
Communication		
Excellent communication, negotiation and influencing skills at all levels	E	A/I
Able to present complex information in an audience-appropriate format	E	A/I
Teamwork and Motivation		
Leads, oversees and monitors progress of key deliverables and timescales through probation/appraisal and takes appropriate action to deal with any issues or problems.	E	A/I
Liaison and Networking		
Collaborates with others to meet deadlines and joint objectives by ensuring dissemination of information in the right format to the right people at the right time. Builds relationships and contacts to facilitate future exchange of information.	E	A/I
Leads and develops internal networks, such as working groups or committees in order to deliver collaborative and cross functional projects or initiatives.	E	I

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Decision Making		
Works with others to make collaborative decisions that may be operational or strategic and impact immediate team or work area only.	E	I
Recommends and advises on available options for decisions that affect operational processes, taking into account any risks.	E	I
Planning and Organising		
Manages time and resources effectively to meet deadlines; routinely monitoring and reviewing progress to ensure effective working of self and others.	E	A/I
Initiative and Problem Solving		
Track record of excellent problem solving skills, ideally in settings which require multiple domain specialist cooperation.	E	A/I
Analysis and Research		
Designs and uses data gathering and analytical methods appropriate for each investigation.	E	I
Produces reports that identify key issues and findings. Recognises and accurately interprets patterns and trends.	E	I
Other Requirements		
Commitment to EDI principles and to the Organisation values	E	I

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.

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 them on 020 3970 2148, or email recruitment@turing.ac.uk.

CLOSING DATE FOR APPLICATIONS: Sunday 29 January 2023 at 23:59

TERMS AND CONDITIONS

This full time post is offered on a fixed term basis for 36 months. The annual salary is £49,025 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.

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**.