Senior Community Manager – Data-Centric Engineering

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 Alan Turing Institute has worked with the Lloyds Register Foundation (LRF), a global charity supporting research, innovation, and education in engineering for over six years. Through this partnership, we have helped establish Data Centric Engineering (DCE) as a new field of research. This has achieved almost 400 publications; a new academic journal focussed on DCE and supported the development of a 3D printed bridge in Amsterdam and an underground farm in London. We are now working on the next phase of our partnership. Through this work, it is our objective to progress from research to translation to support the pull-through to adoption in global industry across engineering disciplines. Ultimately, this work will help improve safety outcomes across a broad range of engineering disciplines.

The Alan Turing Institute will coordinate the work to consolidate and grow a global community of academia and industry specialists working in DCE. The project is composed of data scientists, engineers and practitioners who will help work across four pillars that will support the adoption of DCE innovations, creation of AI standards and regulation, improve skills and develop the community. The team will work closely with industry leaders, engineering bodies, academics and other stakeholders to facilitate the translation of DCE.

This next phase of DCE2.0 aligns with the Institute's broader development of its priorities, including delivering research aligned to national priorities, growing the community and taking national leadership to improve skills and understanding of AI.

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.

The Open Research Community Building Team in the TPS programme ensure that the research that happens at the Institute is created to be maintained, sustained, remixed and reused to make research and innovation more efficient and effective across the national and international data science ecosystem for commercial and public interest technologies alike.

We are recruiting a **Senior Community Manager for DCE** to lead community growth in the next phase of the partnership. They will draw on the expertise from TPS to embed from the start best practices in community

management and open research into the emerging DCE community and broader open source communities in the engineering industry to ensure that this investment delivers FAIR (findable, accessible, interoperable and reusable) outputs that are greater than the sum of their parts.

ROLE PURPOSE

The Senior Community Manager for DCE will create and nurture a disparate community of academics and industry practitioners. We anticipate that the postholder will need to need to embody the values of compassion, stewardship, and collaboration in addition to their commitment to Equality, Diversity and Inclusion as described in the Turing's EDI Principles and Values.

The ideal candidate for DCE's Senior Community Manager will be familiar with the key stakeholders in the engineering community and be able to bring these together to understand their needs and ambitions. They will support people in sharing and promoting the skills that they already have, understand the experiences of people from a range of diverse backgrounds, and identify what they need to build a sustainable community. DCE can only achieve its ambitious goals by creating links with communities of practice across the world and building on the successes of DCE phase 1.

As a steward of their community, DCE's Senior Community Manager will see how individual pieces fit together. They will want to understand the community's broad needs, including what skills and innovations are needed across key themes, including ocean safety, manufacturing and Digital twins. They will guide community members to see how their individual skills can contribute to the specialism, identify gaps in their expertise, and support the development of training to grow skills across the community. They will work closely with DCE Theme Leads to scope and understand the requirements and nature of the themes. Furthermore, they will work with the Research Application Manager (RAM) to facilitate the translation of research and pull-through to adoption; as well as the partnerships team to identify prospective partners that can support the development of further research.

DCE's Senior Community Manager will collaborate with experts in the Turing community and beyond. 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 be an active contributor to The Turing Way, acting as a bi-directional conduit to implement best practices for reproducible, ethical, inclusive and collaborative data science. They will also participate in the Tools, Practices and Systems community.

The postholder will join a Research Application Manager, along with the DCE programme and theme leads, to form the senior leadership of the programme. They will be line managed by TPS Senior Researcher Dr Malvika Sharan, and also work closely with The Turing Way community.

DUTIES AND AREAS OF RESPONSIBILITY

- Identify and connect people and existing communities of practice from across the Turing Institute, policy-makers, industry, the wider engineering community and the public to form a coherent network with the aim of furthering collaborative and interoperable research in data-centric engineering.
- Scan the landscape and horizon for crucial pieces of information about national and international priorities in Data Centric Engineering, areas of focus by public sector, private sector and third sector organisations, and innovations relevant to the emerging field.
- Demonstrate, internally across the DEC community, and to the broader engineering and open source developer communities, how interdisciplinary teams can work together to deliver reliable, reusable insights to understand complex emerging challenges in data-centric engineering research.
- Catalyse connections and collaboration between researchers, industry, and policy-makers across the DCE community. This could come in the form of synchronous regular meetings or asynchronously, for example, through active engagement on distributed communication channels such as Slack and the maintenance of public and private GitHub repositories to documented ongoing work.
- Be an active community member of *The Turing Way* project. 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. Our vision is to build an interconnected web of open source communities in applied data science. We expect all community managers within the TPS Programme to attend regular co-working sessions and participate in discussions on research best practices across a project lifecycle.
- Implement practices - as defined in The Turing Way, and beyond - to ensure these team members demonstrate the highest standards of reproducible, ethical, inclusive and collaborative data science in their work. Some - but not all - of these practices include:

- Onboard and welcome new community members. This will likely include running 1:1 inductions and continuously updating documentation to ensure that resources remain easy to find for new starters and existing team members alike.
- Design, organise and facilitate innovative, inclusive events - remote and in person - for a broad range of community members and collaborators. These can range from small group focused meetings, through team 'coffee chats' to build community, informal mentorship and training, to collaborative contribution events such as hackathons, documentation sprints, or design scoping workshops.
- Review code, analysis, visualisation and infrastructure process documentation. Support community members to participate in collaborative review using pull requests (GitHub) or merge requests (GitLab). This will likely require proactive 'just in time' trainings in using version control using git, and project management in public or private GitHub repositories, as appropriate.
- 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.
- Curate and finalise regular newsletter updates to capture impact stories, showcase community member contributions, and share progress for both internal and external audiences.

- 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.
- 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 Data-Centric Engineering and Tools, Practices and Systems programmes, 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 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

	Essential (E) Desirable (D)	Tested at application(a) Tested at interview (i)
Skills and Requirements Post holders will be expected to demonstrate the following		
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		
Demonstrable knowledge of data-centric engineering	E	A/I
Experience in: - Basic coding skills in any programming language. - Git for version control and Github or GitLab for project management. - An understanding of the importance of good practices for producing reliable software and reproducible analyses (e.g. version control, issue tracking, automated testing, package management, literate analysis tools such as Jupyter and Rmarkdown).	D	A / I
Experience in: • Open research, open source software, participatory and community-led co-creation or team science. • Contributing to, maintaining and/or leading open source research software projects.	D	A/I
Track record of: Publishing articles, FAIR data sets, and/or open source software libraries for an academic audience.	E	A/I
Communication		
Outstanding communication skills, both oral and written. The postholder will routinely be required to communicate more complex, specialist or conceptual information clearly and persuasively, presenting compelling arguments to influence.	E	A/I
Project Management & Project Delivery		
Supports community members by identifying and adapting research processes to meet stakeholders' needs. Takes action to resolve issues and identifies ways of improving processes to avoid repeated challenges.	E	A/I
Proactive approach to managing stakeholders and identifying opportunities for collaboration.	E	A/I
Teamwork and Motivation		
Effective and inclusive teamwork is essential for success in this post. The postholder will be required to lead, oversee and monitor progress of key	E	A/I

PERSON SPECIFICATION

deliverables and timescales and takes appropriate action to deal with any issues or problems.		
Strong interpersonal skills: the ability to form and maintain relationships with a wide range of people at all levels.	E	A / I
Liaison and Networking		
Sets up internal and external networks (in person or virtual) to share information and feedback. Networks with others with shared interests, collaborating on projects and strengthening future relations. Makes use of their researcher profile and credibility to promote the work and image of community project team and/or the organisation.	E	A/I
Decision Making		
Ability to guide others by presenting options and choices to inform their decision making.	D	A/I
Planning and Organising		
Ensures work is completed in line with the community project team & objectives.	E	A/I
Initiative and Problem Solving		
Ability to solve complex problems that occur infrequently where guidance, if available, is not specific.	E	A/I
Analysis and Research		
Gathers data rigorously and conducts robust analysis, and challenge the status quo by questioning assumptions and existing knowledge. Reports findings to wider community and is able to withstand challenge by relying on evidence gathered and processes used for analysis.	E	A/I
Other Requirements		
Commitment to meeting deadlines	E	A/I
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 us 020 3862 3546 or email recruitment@turing.ac.uk.

CLOSING DATE FOR APPLICATIONS: 25 September 2022 at 23:59

TERMS AND CONDITIONS

This full time post is offered on a fixed term basis to 30 September 2027. The annual salary is £46,690-£52,000 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 building a diverse community and would like our leadership teal 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***.***