RESEARCH DATA SCIENTIST / RESEARCH SOFTWARE ENGINEER

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 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's Research Engineering Group work towards maximising impact in data science research projects by realising cutting edge research as professionally usable software tools, so they can be used to address real-world challenges.

The Group's staff are research software engineers, research data scientists and research computing engineers. We note the considerable overlap between these emerging roles and embrace the breadth of interdisciplinary skills and diversity of approaches entailed in these fields. Staff can choose any of these job titles and change their choice as their career progresses.

The Group is central to the Iinstitute's research landscape and will continue to be in high demand as the Institute expands and evolves. To support this, we will be recruiting on a rolling regular basis during throughout this year, appraising and interviewing candidates monthly to ensure we can keep up with the Institute's expansion. .

With this expansion, the REG team is taking on more projects which offer a variety of opportunities to work with different colleagues, departments and partners.

ROLE PURPOSE

In contrast to traditional research careers, we are committed expert collaborators, who join research teams to further the Institute's challenges. We collaborate with scholars across the Institute's research community to enhance the applicability of research for particular problems. We work with clients in industry, government and the third sector to turn their data challenges into research questions. We value expertise across many domains, with current members of the Group having backgrounds in psychology, mathematics, digital humanities, research computing and other areas. We rely on this diversity to design tools, practices and systems to harness the power of data science around the world.

We create software that implements research and use it to analyse client data in a readable, reliable and reproducible fashion. We present conclusions of research and analysis to the research community and clients

through presentations, [research papers](#), [blog posts](#), interactive data visualisations and [open-source software packages](#). We work with state-of-the-art, high performance computing and cloud platforms to realise collaborators' data science and artificial intelligence research at scale.

DUTIES AND AREAS OF RESPONSIBILITY

- Apply state-of-the-art and novel data science and artificial intelligence techniques emerging from the Institute and elsewhere to problems faced by the Turing's clients.

- Collaborate with research colleagues to develop and maintain high-quality, well-tested software embodying research outputs.

- Present, disseminate and explain our work via presentations, reports and well-documented software packages.

- Contribute to the life of the Institute and support its community:

    o Deliver teaching and training to colleagues and students, including within the team in our regular skills sessions.

    o Support research colleagues to make the most of the Institute's secure high performance computing environments for advanced research.

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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		
A PhD or equivalent professional experience in a field with significant use of both computer programming and advanced statistical or numerical methods	E	A/I
Knowledge and Experience		
Fluency in one or more modern programming languages used in research in data science and artificial intelligence. (We particularly work in R, Python, and modern C++, but demonstrable use of other programming languages for research, together with a facility for learning new languages, is most welcome.)	E	I
An understanding of the importance of good practices for producing reliable software and reproducible analyses, such as version control, issue tracking, automated testing, package management and literate analysis tools such as Jupyter and Rmarkdown.	E	I
Communication		
Excellent written and verbal communication skills, including experience in the authoring of technical reports or research papers, and giving presentations or leading classes.	E	A/I
Analysis and Research		
Experience managing, structuring, analysing and visualising research data and the results of computational experiments.	E	I
Teamwork and Motivation		
Ability to lead one's own work independently, including planning and execution, and to collaborate productively as part of a team.	E	A/I
Team Development		
Ability to coach/mentor others or act as "buddy" providing advice, guidance and feedback to help team members work more effectively.	D	A/I
Initiative and Problem Solving		
Demonstrated enthusiasm and ability to rapidly assimilate new computational and mathematical ideas and techniques on the job and apply them successfully.	E	A/I
Other requirements		

An understanding of the importance of equality and diversity within an organisation and a commitment to helping create an inclusive culture.	E	I

ADDITIONAL DESIRABLE EXPERIENCE

The Research Engineering Group is a learning team, and actively encourages its members to develop their skills so that they can apply new techniques and approaches across their projects. A commitment to developing new expertise is therefore very desirable to us. In addition to the technical skills you already have, we will look for evidence of a commitment to learn by looking at new skills you have developed in previous roles, and your interest and plans for acquiring future skillsets.

We note that not all skills useful to us will fall into the categories of data science and software engineering. Experience in teaching and training, building open-source communities, scientific computing, knowledge of public cloud or high-performance computing platforms, or other areas, are also very welcome. If you feel that your skillset and experience would support the Group's activities, we strongly encourage you to apply. We welcome any informal inquiries in regard to this.

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.

In this recruitment round we are looking to hire multiple new team members from any specialty. In addition:

1) We are introducing a new specialisation in our team: "Research Computing Engineer". This presents an exciting opportunity to join the growing team of research computing experts at The Turing.
2) We are also particularly keen to attract a person with an interest and/or experience in digital humanities. The new member would blend this focus with team-wide activities. If it appeals to you, please highlight it in your cover letter.

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 (maximum 3 pages, no photos) and a cover letter (maximum 2 pages) telling us:

- Your past experience working with code and/or data

- Why you would like to become part of the Research Engineering Group

- How your skillset would complement the activities of the team.

If you wish to share links to blog posts, public code repositories or research papers containing work that you have made significant contribution to, please add a link to those in your cover letter.

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For questions about the role and the recruiting process check the Frequently Asked Questions or get in touch with us at recruitment@turing.ac.uk.

CLOSING DATE FOR APPLICATIONS: 06 March 2022 at 23:59

TERMS & CONDITIONS

This full-time post is offered on a permanent basis. The annual salary for this role is £37,000 - £42,000 (depending on skills and experience), with career progression once in post.

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 can also be made for any candidates with a disability.

Please note all offers of employment are subject to continuous eligibility 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*.*