

The Alan Turing Institute

Senior Research Associate / Research Associate – Language Modelling

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 purpose is to make great leaps in data science and AI research to change the world for the better. Its goals are to advance world-class research and apply it to national and global challenges, build skills for the future by contributing to training people across sectors and career stages, and drive an informed public conversation by providing balanced and evidence-based views on data science and AI.

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 300 researchers, a rapidly growing team of in-house research software engineers and data scientists and a business team.

BACKGROUND

The Alan Turing Institute focuses on world-class science and innovation, generating internationally leading research and translating it into real-world impact and deployment. The Institute is developing research in key strategic mission areas in Environment, Sustainability, Health, Defence & National Security and Fundamental Research in AI.

Language models are becoming a matter of national importance as advanced AI systems increasingly underpin critical infrastructure, public services and economic resilience. Reliance on external models risks ceding control over strategic priorities, security, and assurance, while limiting the UK's ability to scrutinise frontier systems at the level required for robust AI safety. Developing sovereign language modelling capabilities — spanning the training, adaptation, fine-tuning and distillation of models, alongside their evaluation and assurance — will provide trusted capability, interpretability research and independent evaluation, strengthen national resilience and supporting the safe, accountable deployment of AI in areas of public value.

ROLE PURPOSE

The primary purpose of the role is to conduct internationally leading research in language modelling, and the postholder will be part of the Institute's Fundamental Research (FR) strategic priority area. The postholder will contribute to the development of sovereign language modelling capabilities — spanning the training, adaptation, fine-tuning, distillation and evaluation of models — that strengthen the UK's national resilience, security and public value. The postholder will be part of a collaborative, multidisciplinary team of researchers and research engineers, and will be expected to engage with internal and external stakeholders and collaborators to support delivery of an ambitious research programme. This role will lead on and work closely with other researchers and team members on various Fundamental Research activities, and in support of other Turing's Science and Innovation more broadly. The Senior Research Associate may be required to manage and/or provide leadership and mentorship of junior team members, such as PhD students, interns or other early-career members of the team.

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HOW YOU WILL MAKE AN IMPACT

- Publish and disseminate high-quality research papers and publications detailing research outputs and project case-studies.
- Communicate or present research outputs to diverse stakeholders, through conferences, events, meetings, and press opportunities as appropriate.
- Adhere to and promote principles of reproducible and ethical data science and ensure secure handling of data and health and safety in all aspects of work.
- Undertake high-quality research, actively contributing to the research aims of the Fundamental Research area.
- Contribute to software development including planning, writing code, package release and management
- Engage with stakeholders to ensure that research outcomes can be deployed in the real world.
- Support the preparation of proposals, applications and reports to external bodies, e.g., for funding and contractual purposes.

Additional duties for appointment at Senior Research Associate level

- Provide technical project management and leadership for research projects, ensuring successful outcomes
- Define the research direction in collaboration with Principal Investigators (PIs).
- Be a point of contact, supporting PIs in engaging with stakeholders regarding projects and deputising in meetings where necessary.
- Take the lead on writing up findings as they emerge, producing and developing reports, and developing publications in peer reviewed journals, in collaboration with the research team.
- Lead on the preparation of proposals and applications to external bodies, e.g., for funding and contractual purposes.
- Present, disseminate and explain our work at meetings/events and contribute to both the internal and external visibility of the Institute.
- Take responsibility for driving collaboration with academic experts and broader research partners from across the Turing, and the wider Turing and external community.
- Manage and/or provide leadership and mentorship of junior team members, such as PhD students, interns or other early-career members of the team
- Play a leading role in undertaking high-quality independent research, actively contributing to and steering the broader research aims of the Turing Fundamental Research area and missions.
- Liaise with Turing FR mission leadership, partners and colleagues to define, understand and prioritise research direction and goals, and balance partner or stakeholders value with research outputs

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)
Knowledge and Experience		
A PhD (or equivalent experience and/or qualifications) in a relevant area which will include machine learning, AI, computer science, mathematics, statistics, physics, engineering or similar inter-disciplinary subjects.	E	A
A solid background in Natural Language Processing and/or Machine Learning, with specific experience in one or more of the following: pre-training, fine-tuning, adaptation or distillation of large language models; model evaluation, benchmarking; alignment and safety techniques (e.g. RLHF/RLAIF, instruction tuning); parameter-efficient fine-tuning; retrieval-augmented generation; efficient training and inference at scale (e.g. distributed training, mixture-of-experts architectures).	E	A I
Experience in developing research software codes and libraries (primarily in Python), ideally with experience in writing code for GPU through frameworks such as Tensorflow, Pytorch, JAX, etc.	E	A I
Track record of the ability to initiate, develop and deliver high-quality research aligned with the mission's research strategy, appropriate to career stage.	E	A I
Evidence of high-quality publication(s) in a relevant field commensurate with your career stage	E	A
Excellent written and verbal communication skills including the ability to present complex or technical information, and to communicate effectively with diverse audiences	E	A I
Ability to carry out research independently and take the lead on writing up findings as they emerge	E	A I
Ability to collaborate successfully with colleagues in a multidisciplinary environment within the organisation/externally to share knowledge and information in order develop practice or help others learn	E	A/I
Ability to initiate, plan and prioritise research projects and ensure effective use of research resources	E – Senior Research Associate	I
Ability to take the lead on research direction in collaboration with the PIs	E – Senior Research Associate	I
Proactive approach to managing stakeholders and their requirements and identifying opportunities for collaboration	E – Senior Research Associate	I
Ability to advise on available options for decisions that affect operational processes, considering any risks	E – Senior Research Associate	I
Experience in scoping and investigating independent research questions within a given overarching theme	D	A I
Previous experience overseeing, supervising or mentoring more junior colleagues' work	E – Senior Research Associate	A I
Other requirements		
Commitment to EDI principles and to the Organisation values (outlined below)	E	I

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APPLICATION PROCEDURE

If you are interested in this opportunity, please click the apply button on our portal. 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 at recruitment@turing.ac.uk.

The covering letter (Max. 2 pages) should address:

- Which role you are applying for and why you are applying for this position
- How you qualify for this position (see criteria under “Person Specification”)
- Publication list (if not covered in CV, can be in addition to the 2-page cover letter)

TERMS AND CONDITIONS

This full-time post is offered on a fixed term basis for 2 years (possibility of extension, dependent on funding).

The annual salary range is £45,505 - £51,465 for Research Associate level / £57,000 - £58,482 for Senior Research Associate level. Our offers include the excellent benefits, including flexible working and family friendly policies, Employee-only benefits guide | The Alan Turing Institute

Candidates who have not yet been officially awarded their PhD will be appointed as Research Assistant at a salary of £42,593 per annum.

The Alan Turing Institute is based at the British Library, in the heart of London’s Knowledge Quarter. We expect staff to come to our office at least 4 days per month. Some roles may require more days in the office; the hiring manager will be able to confirm this during the interview.

EQUALITY, DIVERSITY AND INCLUSION

The Alan Turing Institute is committed to creating an environment where diversity is valued and everyone is treated fairly. We value diversity of background, experience, and perspective, and are proud to be an inclusive employer. We warmly encourage applications from all backgrounds, particularly from groups currently under-represented in our sector. If you feel passionate about this role but don’t meet every single requirement, please apply — we recognise that great candidates may bring strengths beyond the criteria listed.

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 recruitment@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.

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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