

The Alan Turing Institute

LEAD APPLIED 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 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 Institute's Defence & National Security programme builds capability that gets used, not just published. We are creating a new Applied Engineering team to add to the delivery engine behind that: a cross-functional group of software engineers, data scientists, and data engineers, who take research from across the Institute and academia to turn it into deployable tools that analysts and decision-makers rely on. The team's work will make sense of disparate data streams and produce the pipelines and tooling that let people make real-world decisions with confidence.

ROLE PURPOSE

We are looking for a Lead Applied Engineer to be the technical anchor of this team from day one. This is a hands-on role: you will spend most of your time designing, building and deploying. You will be hired alongside the first three engineers, so you start with colleagues around you rather than a team that exists only on paper. Strategic direction comes from senior Institute staff; the day-to-day technical leadership of the team is yours. You will work directly with stakeholders to identify the highest-impact problems and lead the team from project design to delivery into constrained environments. You will set the technical standards for the team, leading by example.

The role sits at the intersection of engineering delivery, solution architecture and applied AI. It suits a strong engineer with leadership experience who is comfortable in fast-moving environments, is motivated by direct operational impact and enjoys engaging closely with stakeholders.

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HOW YOU WILL MAKE AN IMPACT

- Design and build: take Defence problems from requirement through architecture to working, deployable systems, and stay close to the code throughout.
- Work directly with Defence customers to draw out requirements and translate them into technical solutions that operate within the constraints of the deployment environment.
- Establish how the team builds from day one: secure development lifecycle, MLOps and deployment patterns, evaluation and assurance of AI systems, code quality and documentation.
- Act as the bridge between Turing research and operational delivery: for example, assessing research outputs for maturity and exploitability & deciding what to prioritise for delivery
- Review and challenge the team's technical work, unblock delivery and make the calls that keep it moving.
- Provide day-to-day technical leadership and management for a small cross-functional team
- Provide technical quality assurance review of the Turing policy research team's outputs

YOU'LL THRIVE IN THIS ROLE IF YOU

- Are motivated by producing work that has **real operational relevance and impact** for UK defence and national security.
- Can **hold a technical position under scrutiny** – from senior stakeholders and from your own team – and change it when the evidence says you should.
- Want to **lead by building** – setting the bar through your own work and the reviews you give, rather than through process.
- Move fluidly between **customer conversations, technical design and hands-on delivery**.
- Have **built data and AI systems from the ground up** across cloud and on-premise environments.

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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Skills and Requirements Post holders will be expected to demonstrate the following:	Essential (E) Desirable (D)	Tested at application (A) Tested at interview (I)
Strong, current, hands-on software engineering – architecture, secure development, testing, CI/CD – with the credibility to design, build and review production systems and to challenge the team's technical work.	E	A/I
Proven ability to translate customer requirements into a technical design that is buildable, secure and deliverable within the constraints of the deployment environment.	E	A/I
Experience providing technical leadership to/in a multidisciplinary engineering team (software, data, data science, platform) through the full delivery lifecycle, including some line management responsibility.	E	A/I
Experience working at the research–engineering interface: assessing academic or research outputs for maturity and exploitability, and deciding what to harden and productionise.	E	A/I
Ability to communicate and defend technical judgement clearly with senior stakeholders under scrutiny, and to revise it when the evidence warrants.	E	I
Hands-on experience productionising AI systems – including classical ML pipelines and agentic/LLM-based systems – from prototype through to assured, monitored and maintained services.	D	A/I
Experience delivering into Defence, national security or similarly constrained high-assurance environments, including working within classified or restricted settings.	D	A/I
Eligible to obtain and hold Developed Vetting security clearance, and able and willing to work on-site with Defence partners in London 3 days per week.	E	A

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, information required is outlined clearly in the full Job Description. If you have questions about the role or would like to apply using a different format, please contact us at recruitment@turing.ac.uk.

As this role requires eligibility for Developed Vetting (DV) clearance, it is an essential part of the application process that you include the following information as part of your cover letter:

- Your current nationality
- Your nationality at birth
- Other nationality (include dual nationality if applicable)
- Confirmation that you have been residing in the UK for the past 5 years (if you haven't, please provide details of when and where you resided and the reason)
- Country where you were born.
- County in which you were born.
- Town where you were born.

Please note, if these details are not provided, we will be unable to progress with your application for this role.

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TERMS AND CONDITIONS

This full-time post is offered on a permanent basis. The annual salary range is £69,000 – £82,500 plus excellent benefits, including flexible working and family friendly policies, [Employee-only benefits guide | The Alan Turing Institute](#)

Given the close working relationship with government partners, this role requires regular on-site presence with Defence partners in London 3 days per week, with possible occasional travel to other sites in the UK, in addition to the Institute's standard office attendance expectations.

Eligibility for DV clearance is an essential requirement for this role. Eligibility criteria and further information on the process can be found on the UK Government security vetting [website](#). Please note that we require you to provide essential information in your cover letter in order to progress your application. Details of this are in the Application Procedure section. Please note, if these details are not provided, we will be unable to progress with your application for this role.

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

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How to do it

- Be open to feedback
- Communicate openly
- Treat everyone with respect, regardless of level
- Embrace the opportunity to learn
- Help educate our community
- Take time to reflect to do it better next time