

**The
Alan Turing
Institute**

Chief Technology Officer

Candidate Information
Pack



The Alan Turing Institute

Welcome

I'm delighted you are considering joining the Alan Turing Institute as our Chief Technology Officer.

We have an ambitious future as the UK's national institute for AI and data science. Our mission is to secure the UK's national resilience for the age of AI: turning world-class research and engineering into capabilities the country can rely on in moments of opportunity, uncertainty and risk.

The Chief Technology Officer will help ensure that the Institute's technology choices, engineering practices, platforms and digital infrastructure enable that mission. Advanced model building sits at the heart of this role: creating the compute, data and software environments needed to train, evaluate and deploy AI models safely, efficiently and at scale.

This is an opportunity to shape technology across the Institute and beyond, build high-performing teams, and strengthen how we work with government, academia, industry and the wider AI ecosystem. You will help set the tone and direction of the Institute as a whole, working closely with the CEO and Executive Leadership Team, while building the advanced engineering capability needed for the UK to turn AI research into trusted national capability.



Dr George Williamson
CMG

Chief Executive Officer

About the opportunity

The Alan Turing Institute is seeking an outstanding technology leader to become its Chief Technology Officer.

This is a rare opportunity to shape the technology strategy of the UK's national institute for AI and data science at a time when advances in AI are transforming economies, public services, national security and society.

The Chief Technology Officer will provide the technology and engineering leadership that underpins this ambition. At the heart of the role is the advanced engineering required to build, train, evaluate and deploy modern AI systems: the compute, data, software, security and delivery environments needed for large-scale model development. The CTO will define the Institute's technology strategy, strengthen the route from research to deployable capability, and ensure that AI model engineering, high-performance computing, secure infrastructure and resilient operations are fit for future national needs.

We are seeking a leader who combines deep technical credibility with the ability to lead people, make effective investment choices, influence senior stakeholders, build partnerships and deliver complex technology outcomes.

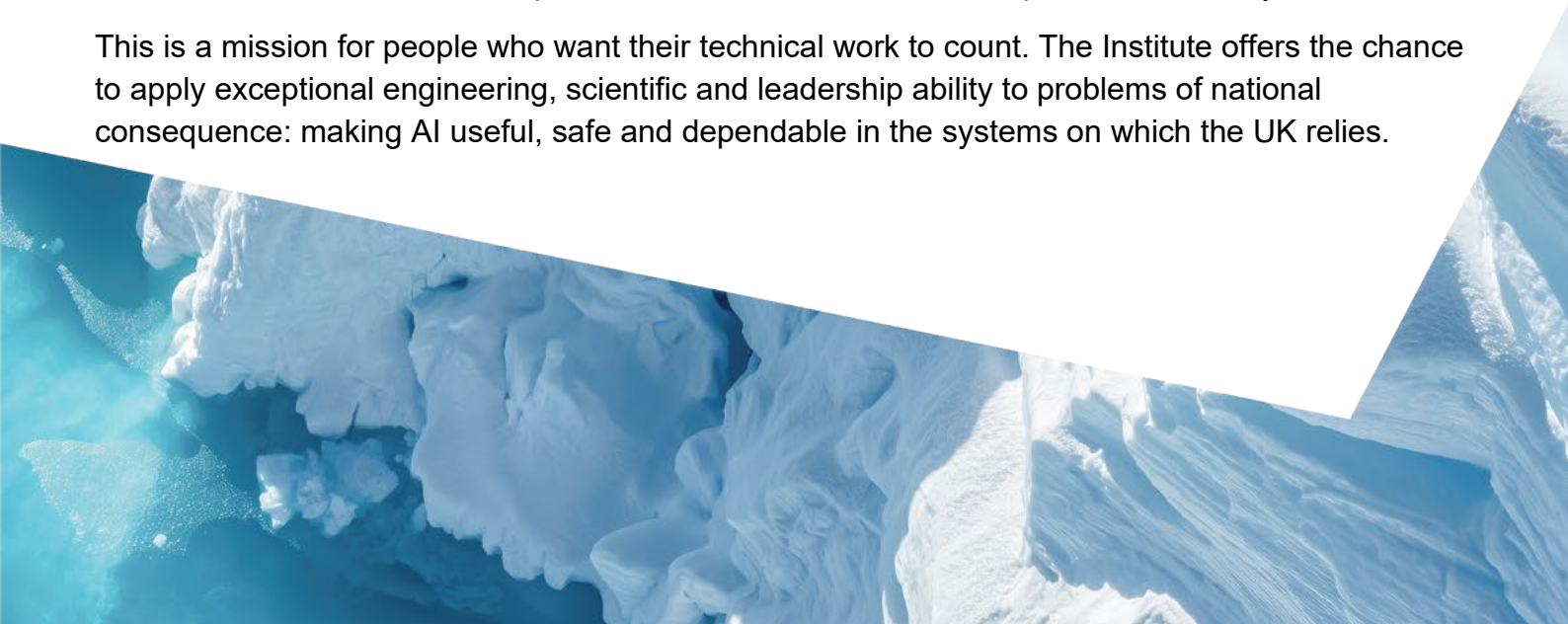
Reporting to the Chief Executive Officer and sitting on the Executive Leadership Team, the Chief Technology Officer will help shape the future of the Institute and its contribution to the UK's AI ecosystem.

Our Mission

We are the UK's independent national institute for AI and data science. Our mission is to secure the UK's national resilience for the age of AI: building the capabilities that help the country understand, withstand and respond to the risks and opportunities created by a rapidly changing world.

We work with the people responsible for the UK's critical systems — across government, public services, infrastructure, security, health, the economy and the environment — to diagnose the hardest problems they face and turn them into ambitious programmes of research, engineering and deployment. By convening the best minds from academia, industry and government, we build national AI and data science capabilities that can be trusted in the places where they matter most.

This is a mission for people who want their technical work to count. The Institute offers the chance to apply exceptional engineering, scientific and leadership ability to problems of national consequence: making AI useful, safe and dependable in the systems on which the UK relies.



How We Create Impact

The Institute exists to connect scientific excellence with national need.

We bring together expertise from across academia, government, industry and the wider research ecosystem to tackle challenges of strategic importance to the UK. Through frontier research, collaboration and innovation, we help translate advances in AI and data science into capabilities that strengthen resilience, inform decision-making and create long-term public benefit.

Success is measured not only by the quality of the science we produce, but by the impact it delivers for the nation.

Why join the Alan Turing Institute?

Few scientific leadership roles offer the opportunity to shape both the future of a discipline and its contribution to society at a national level.

As the UK's national institute for AI and data science, the Alan Turing Institute occupies a unique position at the intersection of scientific discovery, policy, technology and public purpose. The Chief Scientific Officer will have the opportunity to influence the direction of AI research, help shape national capability in one of the defining technologies of our time, and ensure that scientific advances deliver meaningful benefits for the UK.

This role offers the chance to work alongside leading researchers, policymakers, industry leaders and international partners, while building and leading world-class scientific teams. For an exceptional AI scientist, it is an opportunity not only to advance the field, but to help determine how the UK harnesses AI to strengthen resilience, prosperity and long-term public benefit.

For the right individual, this is more than a leadership role. It is an opportunity to leave a lasting mark on the future of AI and on the future of the nation.



The Role

The Chief Technology Officer is responsible for the technology and engineering leadership of the Institute, with a particular focus on building the advanced AI engineering capability needed to train, evaluate and deploy models safely, efficiently and at scale.

Reporting to the Chief Executive Officer and working closely with the Chief Scientific Officer, Chief Strategy and Delivery Officer and other Executive Leadership Team colleagues, the CTO will line manage the Director of IT and provide leadership for the Institute's Research Engineering teams. They will define technology direction, align investment with strategic priorities, and create the conditions for research and delivery teams to succeed.

The role combines technology strategy, engineering leadership, organisational leadership and external influence. The successful candidate will help determine what capabilities the Institute builds, buys or partners to access, and how those choices deliver impact for the UK.

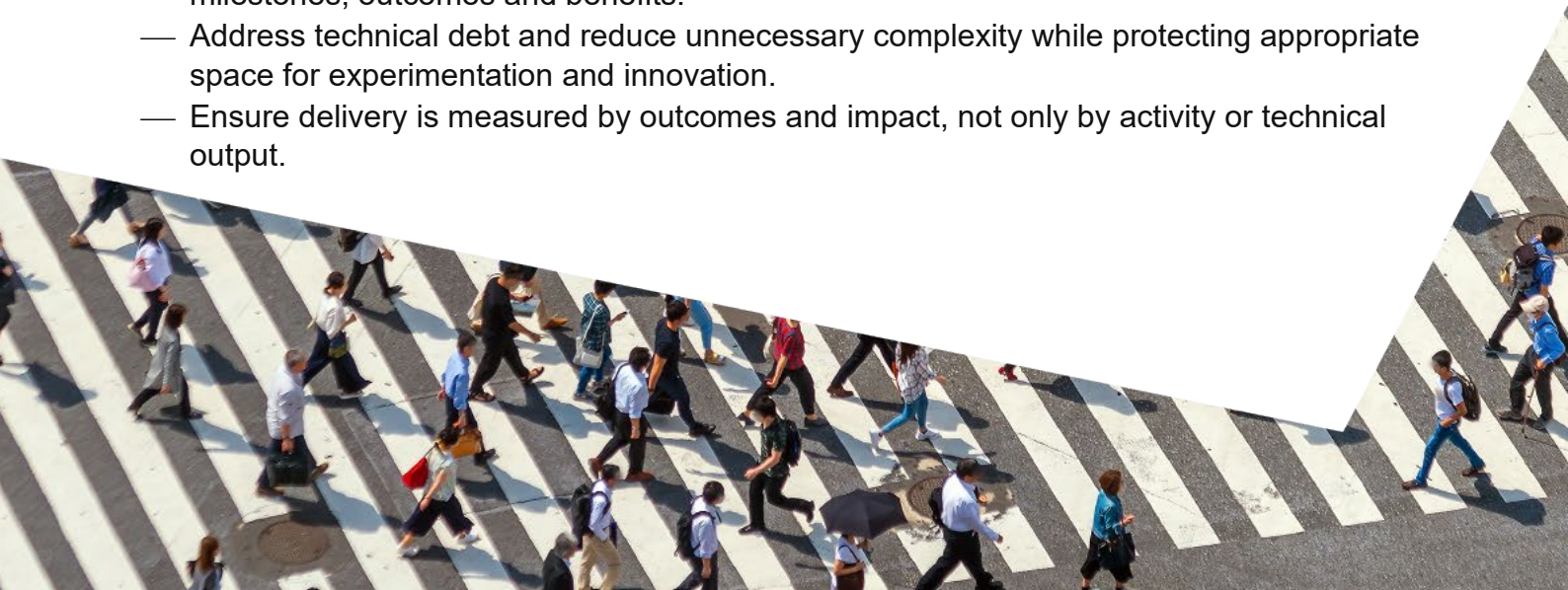
How You Will Make an Impact

Technology Strategy and Architecture

- Define and articulate a compelling technology strategy aligned with the Institute's mission and organisational strategy.
- Establish clear enterprise and solution architecture principles that enable interoperability, reuse and responsible scaling.
- Set priorities for platforms, infrastructure, tooling and technical capability, balancing near-term delivery with long-term sustainability.
- Provide technology leadership and constructive challenge as a collegiate member of a joined-up Executive Leadership Team.
- Advise the Board and Executive Leadership Team on technology opportunities, dependencies, investment choices and risk.

Engineering and Delivery

- Strengthen the route from scientific research and prototypes to secure, reliable and maintainable capability.
- Set and oversee engineering standards, including software quality, testing, documentation, service management and technical assurance.
- Create transparent delivery disciplines that connect strategy, portfolio choices, resources, milestones, outcomes and benefits.
- Address technical debt and reduce unnecessary complexity while protecting appropriate space for experimentation and innovation.
- Ensure delivery is measured by outcomes and impact, not only by activity or technical output.



AI Model Engineer and Training Infrastructure

- Lead the development of the Institute's end-to-end AI model engineering capability, spanning data pipelines, pre-training, fine-tuning, post-training, evaluation, deployment and operational monitoring.
- Oversee the architecture and operation of high-performance compute environments for advanced AI, including large GPU clusters, high-bandwidth networking, storage, schedulers, orchestration, observability and failure recovery.
- Ensure large training runs can be executed efficiently and reproducibly, with robust approaches to experiment management, checkpointing, restart, lineage, model registry and technical assurance.
- Drive performance engineering across the AI stack, including GPU utilisation, memory efficiency, distributed communication, I/O bottlenecks, kernel and compiler optimisation, and framework-level improvements.
- Work closely with scientists and engineers to support pre-training, fine-tuning, reinforcement learning or other post-training approaches, evaluation, safety testing and deployment of advanced AI models.
- Build capability in data engineering for AI, including ingestion, cleaning, filtering, deduplication, labelling, tokenisation, versioning, quality assurance, provenance and governance.
- Establish approaches to capacity planning, energy use, cost optimisation and supplier strategy for compute-intensive AI workloads.
- Maintain awareness of industry-standard AI infrastructure while encouraging disciplined experimentation with alternatives to GPUs and conventional HPC architectures

Data, Infrastructure, Security and Resilience

- Ensure the Institute has an effective approach to compute, cloud, data platforms and research technology infrastructure.
- Embed security, privacy, responsible technology and resilience into technology design and operation.
- Oversee technology risk, continuity, supplier dependencies and the controls needed for sensitive or mission-critical work.
- Support proportionate governance that enables pace while meeting the Institute's obligations and stakeholder expectations.

Talent and Culture

- Build, lead and develop high-performing, multidisciplinary technology and engineering teams.
- Clarify roles, accountabilities and career pathways across engineering, architecture, platforms and technology operations.
- Create an inclusive culture of technical excellence, curiosity, collaboration, ownership and continuous improvement
- Attract and retain scarce technical talent and develop future technology leaders.

- Build productive working relationships between scientists, engineers, delivery professionals and corporate functions.

Partnerships, Influence and Ecosystems

- Build trusted relationships across government, academia, industry, funders and the technology community.
- Develop strategic partnerships that expand access to capability, infrastructure, expertise and routes to impact.
- Represent the Institute credibly in national and international technology discussions.
- Provide informed leadership on build, buy and partner decisions, including commercial and supplier strategy.

What We Are Looking For

Technology Leadership

- A significant record of technology leadership in a complex, mission-led, research-intensive or innovation-driven environment.
- Experience defining technology strategy and translating it into prioritised investment and measurable delivery.
- Strong technical breadth across modern software engineering, architecture, data, cloud, security, technology operations and high-performance computing for AI workloads.
- The judgement to distinguish where deep personal expertise is required from where to draw on specialists.
 - Deep credibility in AI systems engineering, high-performance computing or large-scale distributed infrastructure, with evidence of leading teams or platforms that support substantial machine learning workloads.
 - Experience with the practical engineering of model training runs, including data pipelines, distributed training, orchestration, monitoring, checkpointing, fault tolerance, evaluation and performance optimisation.
 - Familiarity with modern AI training stacks, including GPU clusters, high-bandwidth networking, distributed machine learning frameworks, cloud and on-premise compute environments, storage architectures and MLOps tooling.
 - The ability to make informed build, buy and partner decisions across compute, data, tooling and AI infrastructure, including when to use standard hyperscale or GPU-based approaches and when to experiment with alternative architectures.

Transformation and delivery

- A track record of delivering complex technology portfolios and improving delivery performance across organisational boundaries.

- Experience moving prototypes, research outputs or emerging technologies towards robust products, platforms or operational capability.
- Evidence of simplifying technology estates, addressing technical debt and improving engineering standards
- Strong commercial judgement, including technology investment, suppliers, partnerships and value for money

People and Organisational Leadership

- Experience building, leading and developing substantial multidisciplinary technology teams.
- A collaborative and inclusive leadership style that creates clarity, accountability and trust.
- The ability to influence senior leaders and bring together scientific, technical, operational and external perspectives.
- High levels of integrity, credibility, emotional intelligence, resilience and adaptability.

Influence and Partnership

- Credibility with leading researchers, policymakers, funders and industry leaders.
- Experience building influential partnerships across organisational and sector boundaries.
- Exceptional communication skills and the ability to explain complex ideas to diverse audiences.
- The ability to operate effectively in a high-profile, rapidly evolving and nationally significant environment.

Desirables

- Experience in frontier AI labs, AI infrastructure start-ups, hyperscale or cloud AI teams, GPU-cloud providers, advanced ML systems groups, research computing environments or other technology-intensive settings relevant to large-scale AI model development.
- Experience working with government, national institutions, universities, defence, security or regulated environments.
- Experience of technology translation, product development, innovation or commercialisation.
- An established network across the UK or international technology ecosystem.

The Person

We are seeking a technology leader who combines technical credibility with the ability to shape institutions, lead people and deliver results through others.

The successful candidate will be equally comfortable setting long-term direction, making difficult prioritisation decisions and creating the practical conditions for multidisciplinary teams to deliver. They will value scientific excellence while bringing the engineering discipline needed to turn promising work into secure, scalable and sustainable capability. They will understand that training

advanced AI models is not only a research challenge, but an engineering challenge involving data, compute, software, reliability, security, evaluation, cost and energy.

Most importantly, they will be ambitious and motivated by public purpose and by the opportunity to ensure that advances in AI and data science deliver meaningful benefit for the UK.

Reward and Benefits

Salary: Competitive – details available upon application

Location: Kings Cross, London

Contract: Permanent

Benefits include: 30 days holiday, Private Medical Insurance and a 10% contributory pension

Equality, Diversity and Inclusion

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 passionately about this role but don't meet every single requirement, please apply – we recognise that great candidates may bring strengths beyond the criteria listed.



Application Process

The Alan Turing Institute is committed to attracting exceptional and diverse talent and welcomes applications from candidates from all backgrounds.

To apply, candidates should submit:

- A full and current Curriculum Vitae.
- A cover letter of no more than one page outlining their interest in the opportunity, how their experience aligns with the role, and the contribution they believe they could make as Chief Technology Officer.

Applications should be submitted via our candidate portal

As this role requires eligibility for Developed Vetting (DV) clearance, applicants must be eligible to obtain DV clearance as a condition of appointment.

Closing Date: 24 October 2026

The Alan Turing Institute is committed to creating an inclusive environment where everyone can thrive. We welcome applications from all suitably qualified candidates and particularly encourage applications from groups currently underrepresented in AI, data science and research leadership.

Further Information

For a confidential discussion about the opportunity, please contact: Julia Thomas, Head of Talent jthomas@turing.ac.uk

An abstract, low-poly geometric pattern in various shades of blue, resembling a crystalline or digital structure, occupies the upper left portion of the image. It features sharp, triangular facets that create a sense of depth and movement.

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