

IMPERIAL

AI Solution Architect

Department/Division/Faculty:	Information and Communication and Technologies
Campus/Location:	White City Professional Services Hub
Job Family/Level:	Professional Services Level 5 (Salary scales)
Responsible to:	Director of Architecture and Technology Operation
Line management for:	N/A
Key working Relationships (Internal):	Heads of ICT Functions and their teams Head of Departments, Department and Faculty representatives, Professional Services team members
Key Working Relationships (External):	Suppliers IT thought leaders within and outside of Higher Education
Contract type:	Full Time - Open Ended

Purpose of the Post

As an AI Solution Architect working across all ICT product lines and more widely across Imperial, you play a pivotal role in shaping how artificial intelligence, machine learning and data-driven capabilities are designed into the technology landscape that underpins our world leading teaching, research, and student experience. You will collaborate closely with product and platform teams, engineering, data, academic units, and professional services to design secure, scalable, responsible and sustainable AI solutions. The role ensures that solutions align with:

- Imperial's Digital Strategy
- Enterprise Architecture principles and standards
- Product and platform roadmaps
- Cybersecurity and regulatory requirements
- Responsible AI, data governance and ethics

Key Responsibilities

Solution architecture and design:

IMPERIAL

- Leads the development of AI and data solution architectures across ICT product lines and Imperial, ensuring alignment with enterprise architecture principles, technology standards and the Imperial Digital Strategy.
- Define architecture designs that support scalability, resilience, interoperability and long-term sustainability.
- Provide architecture guidance to product and engineering teams throughout the design, build and operational lifecycle.
- Ensure solutions align with user journeys, product roadmaps, security, data governance, responsible AI and regulatory obligations.
- Produce and maintain architectural artefacts including solution design, architecture diagrams, reference architectures and design patterns.
- Design AI solutions spanning generative AI and large language models, machine learning and the data pipelines and MLOps needed to deploy and operate them responsibly and at scale.
- Define reference architectures and guardrails for AI agents, including tool access, permissions, autonomy levels and human oversight

Architecture Governance

- Contribute to architecture governance processes including the Technical Design Authority (TDA) and the various technology working groups as well as the communities of practice
- Review and assure solution designs across the ICT portfolio to ensure compliance with enterprise architecture standards.
- Ensure adherence to cybersecurity, data protection, responsible AI and technology standards.
- Support the continuous evolution of Imperial's architecture standards and reference architectures.
- Works across multiple product and platform domains to ensure interoperability and alignment with enterprise architecture

Technical leadership

- Provide technical leadership during delivery to ensure implementations align with approved architecture designs. Champion modern engineering practices; Including but not limited to:
 - API first architecture
 - Cloud native development
 - DevOps and automation
 - Platform based architecture

MLOps and responsible AI practices

- Evaluate emerging technologies, products and platforms, including AI and data technologies, providing clear recommendations on their suitability within Imperial's digital ecosystem.

Collaboration and stakeholder engagement

- Facilitate architectural decision making across ICT product lines and Imperial teams
- Work closely with product managers, delivery leads, engineers and stakeholders to ensure solutions meet business and user needs. Contribute to the Architecture Community of Practice, Architecture Working Group and Technical Design Authority to support knowledge sharing and capability development.
- Act as a cross-cutting AI design authority, advising and enabling product lines across ICT and teams across Imperial on the responsible adoption and integration of AI.
- Translate complex technical concepts into clear, outcome focused solutions for both technical and non-technical audiences.
- Support research groups adopting AI tools and platforms, balancing academic freedom with security and data obligations

Role Specific Capabilities

Requirements

Candidates/post holders will be expected to demonstrate the following:

**Essential (E)/
Desirable (D)**

Education

Degree or equivalent, preferable a technical qualification or comparable.

D

Experience

Product or platform delivery, with experience across full lifecycle from discovery and design through to delivery, operation and decommissioning.

E

Designing complex digital or enterprise solutions within large, diverse or federated organisations.

E

Working with key stakeholders across an organisation, collaborating to deliver outcomes with organisational strategy and architectural principles.

E

Assessing and selecting technologies, including engaging with supplier and formal procurement processes (e.g. Request for Proposal, Request for Quotation).

E

Broad technical experience across multiple product, platform or technology domains

E

Designing and delivering AI, machine learning or data-driven solutions within large or complex organisations.

E

Experience integrating AI capabilities across multiple systems, product lines or domains, ensuring interoperability and reuse.

E

IMPERIAL

Experience contributing to architecture governance, design reviews or technical assurance process	D
Experience working within the Higher Education sector	D

Knowledge

Understanding of current and emerging technologies, including cloud platforms, enterprise applications, networking and data platforms.	E
Grasp of architectural approaches and frameworks, including cloud architectures, integration platforms, API's and microservices.	E
Ability to solve and breakdown complex problems, with an approach that enables evaluation of modern technologies and trade-offs between solutions.	E
Understanding of enterprise architecture principles and the role of solution architecture within a wider technology ecosystem.	E
Understanding of cybersecurity principles and secure-by-design approaches to solution architecture	E
Understanding of accessibility and inclusive design principles	D
Understanding of data governance, data management and data quality within large institutions	D
Understanding of AI and machine learning concepts, including generative AI and large language models, and how they are applied in enterprise solutions.	E
Understanding of the data architecture, pipelines and MLOps needed to build, deploy and operate AI solutions.	E
Knowledge of AI and ML platforms, tooling and services, including cloud AI/ML services, LLM frameworks and vector data stores.	E
Awareness of AI-specific security and risk considerations, including model, data and prompt-related threats, and of emerging AI regulation and standards.	D
Awareness of emerging AI and data technologies, with the ability to evaluate their potential impact, suitability and architectural implications within higher education, research and professional services contexts.	D

Skills & Abilities

Strategic thinking with ability to align technology solutions with product and platform roadmaps and organisational strategy.	E
Ability to engage effectively with a wide range of audiences, from senior stakeholders through to technical teams, external vendors, and industry experts.	E
Analytical and problem-solving skills to support the development of solutions aligned with Imperial's target architecture.	E
Ability to produce clear and high-quality architectural artifacts for technical and non-technical audiences.	E
Ability to provide technical leadership across cross-functional teams with focus on collaboration and knowledge sharing.	E

Ability to develop and communicate technology roadmaps that support long term platform evolution	D
Ability to assess and apply AI, machine learning and data-driven technologies responsibly, considering architectural fit, value, risk, ethics, security, data governance and regulatory compliance.	E
Ability to design responsible, secure and ethical AI solutions, embedding appropriate guardrails, evaluation and human oversight.	E
Ability to advise and enable teams across ICT and Imperial on the appropriate and responsible adoption of AI.	E

Further Information

Please note that job descriptions cannot be exhaustive, and you may be required to undertake other duties, which are broadly in line with the above key responsibilities.

[Our values](#) are at the root of everything we do and everyone in our community is expected to demonstrate Imperial:

- Respect
- Collaboration
- Excellence
- Integrity
- Innovation

Employees are also required to comply with all Imperial policies and regulations.

We are committed to equality of opportunity, to eliminating discrimination and to creating an inclusive working environment for all. We encourage candidates to apply irrespective of age, disability, marriage or civil partnership status, pregnancy or maternity, race, religion and belief, gender reassignment, sex, or sexual orientation. You can read more about our commitment [on our webpages](#).

October 2026