

G-Cloud 15

Full-stack AI Development

Service Definition

Datasparq Full-stack AI Development

Datasparq's Full-stack AI Services focus on designing, building and deploying AI and machine learning capabilities that are embedded directly into user-friendly tools and workflows. The service ensures that AI is accessible and usable at the point of need, rather than hidden behind code, notebooks or specialist interfaces.

Many organisations have invested in data and AI capabilities but struggle to translate these models into day-to-day operational use. Common challenges include solutions that require specialist knowledge to operate, outputs that are difficult to interpret, and models that remain disconnected from real business processes. As a result, value is limited and adoption is low.

Datasparq addresses these challenges by combining data science, software engineering and user-centred design (UCD). We deliver purpose-built tools that integrate data and AI outputs directly into the systems, interfaces and workflows that users already rely on. This approach ensures AI supports decision making, automation and augmentation in a way that is practical, explainable and trusted.

Full-stack AI Services can be delivered as standalone engagements or as part of a broader data, platform or AI programme. The service is technology agnostic and can be delivered across Microsoft Azure, Google Cloud Platform, Databricks and Snowflake, depending on client context. Our approaches align with the GDS Technology Code of Practice to enable safe, secure and accessible solutions for government teams and the public.

What the service covers

Datasparq's Full-stack AI Services cover the full lifecycle required to move from an AI or data-driven idea to a usable, production-ready solution. Typical areas of coverage include:

- Redesigning and architecting new data and AI enabled workflows and user interactions aligned to how users make decisions or complete task
- Applying a focus on where to optimise the human-in-the-loop in these new processes in order to get the best of human and machine
- Design and build of bespoke user interfaces such as web applications, dashboards, forms, workflows or embedded components into existing tools, utilising User-Centred Design approaches.
- Development of integrations and user interfaces to make use of, customise, and expose underlying AI services such as LLMs, Machine-Learning Models, or output datasets tailoring them to business and user needs
- Integration of AI capabilities with existing systems, data sources and live data feeds
- Implementation of human in the loop controls to support oversight, review and exception handling
- Testing, validation and assurance of model behaviour, performance and outputs
- Deployment of data and AI solutions into live environments with appropriate security and access controls
- Ongoing enhancement, support and maintenance of data pipelines and AI enabled tools where required

How Datasparq works

Datasparq takes a design-led, delivery focused approach to Full-stack AI. We start by understanding the user, the decision or task they are performing, and the constraints of the environment they operate in. This ensures that AI is applied where it adds value, rather than as a standalone technical exercise.

Our delivery approach is iterative and collaborative. We work closely with users to prototype interfaces, test assumptions and refine how AI outputs are presented and used. This helps surface practical issues early and increases confidence in the solution, whilst also ensuring the most optimal human in the loop process.

Data transformations and AI model development is closely integrated with software engineering. Models are designed with deployment in mind, and are exposed through APIs or services that can be consumed by applications and interfaces. This avoids common pitfalls where models perform well in isolation but are difficult to operationalise.

We place strong emphasis on transparency and trust. Outputs are designed to be explainable, with context and rationale provided to users where appropriate. Human oversight is built into workflows to ensure AI supports, rather than replaces, professional judgement.

Solutions are hardened for production through structured testing, monitoring and documentation. Where required, Datasparq provides ongoing support through managed services, ensuring AI enabled tools remain reliable and effective over time.

Where required, Datasparq provides support using NSV SC-cleared personnel, enabling safe operation within sensitive or restricted public sector environments. Security, data protection and responsible use of AI are embedded into day-to-day service operation, aligned with ISO/IEC 27001 controls and government guidance.

Responsible and trustworthy AI

Responsible use of AI is a core part of Datasparq's offering. We support public sector organisations to design AI strategies and solutions that are ethical, explainable and aligned to existing data protection, security and assurance frameworks. This includes consideration of:

- Data governance, quality and provenance
- Model transparency, accountability and monitoring
- Human oversight and decision support
- Organisational controls, assurance and risk management

Our work helps organisations move forward with confidence by ensuring that governance and responsibility are designed in from the outset, rather than treated as an afterthought.

Enabling adoption and long term value

Datasparq recognises that strategy and solutions alone do not deliver outcomes. Successful AI and data initiatives depend on adoption, skills and cultural change. As part of our engagements, we help organisations plan for:

- Workforce impact and skills development
- Change management and communications
- Measures and metrics to track value and benefits realisation

- Building sustainable in house capability rather than long term dependency

This ensures that AI and data investments translate into improved services, better decisions and lasting organisational capability.

Typical outcomes for buyers

Buyers using Datasparq's Full-stack AI Services typically achieve:

- AI and data capabilities that are embedded directly into operational tools and workflows
- Improved adoption of AI through intuitive, user-friendly interfaces
- Reduced reliance on specialist teams to access or interpret AI outputs
- Faster and more consistent decision making supported by data and models
- Increased confidence in AI through explainable outputs and human oversight
- Practical automation and augmentation of time-consuming manual tasks
- Production-ready data and AI solutions rather than isolated proofs of concept
- Clear visibility of model performance and usage over time
- Greater return on investment from data and AI capabilities

Datasparq's Full-stack AI Services help organisations move beyond experimental data science and deliver AI solutions that are trusted, usable and embedded into everyday work.

Further Service Details

Pricing

This service will be based on the standard Datasparq rate card for consulting services.

Standards and assurance

Datasparq delivers its services in line with recognised UK Government standards and good practice for security, data and digital delivery. We are ISO/IEC 27001 and Cyber Essentials certified and operate in accordance with UK GDPR and the Data Protection Act 2018.

Our services align with relevant government guidance including the NCSC Cloud Security Principles, the Technology Code of Practice, and established approaches to data governance, ethics and responsible use of AI. We apply proportionate security, assurance and risk management controls based on the nature of the service and the data involved.

Datasparq applies a responsible and ethical approach to the use of AI. We work with clients to ensure that algorithms and data driven tools are used fairly, transparently and without bias or prejudice. Where potential ethical risks are identified, we will raise these with the client and support appropriate mitigations to ensure fair treatment of individuals and compliance with relevant standards and guidance.

Service Constraints

Specific service constraints will be agreed at initial engagement, however typically no maintenance or modification to developed solutions shall be undertaken without direct approval from the customer.

If operationally necessary, any scheduled modifications and enhancements to developed solutions will be undertaken outside of typically working hours or in scheduled system downtime.

Service Levels

Specific levels of service and expected performance criteria will form part of the engagement scoping and contractual agreement.

Backup/Restore and Disaster Recovery (DR)

Documents and solutions will be regularly backed up as part of our ISO27001 assured backup and business continuity processes agreed. Disaster recovery options will be considered on a case-by-case basis from the needs of the customer.

Factors to consider include:

- Mission critical severity of the solution
- Previously agreed uptime targets
- Size and geographical location of the user base

Solutions range from automated failover capabilities with redundant systems to take load capacity in the event of total failure, to secure off site data storage that can be utilised to recover manually.

Training

Following initial engagement, training documentation will be provided as per the contract specification. If additional training is identified for system end users this can be delivered through service support delivery offering.

Typical training approaches range from workshops and mentoring at service go-live to longer-term solutions such as an extended on-site presence and support. Training will be developed in conjunction with the customer to achieve a best fit for the required skill levels and audience.

Ordering and invoicing process

Initial ordering of services will be confirmed by contract signature and receipt of confirmed purchase order to Datasparq Limited.

Consumer responsibilities

No specific consumer responsibilities have been identified for this specialised service offering. Customer dependencies and requirements will be discussed on an individual engagement basis and be reflected in contractual agreements.