

MI Model Development

G-Cloud

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Machine Learning Model Development

Machine learning model development focused on experimentation, training, and validation. We develop use-case-specific models to evaluate, understand, and prepare for controlled deployment.

1 Service Overview

Appvia develops custom machine learning models for defined analytical and predictive use cases. We use cloud-based ML platforms to deliver models that are validated, documented, and ready for controlled deployment.

What you get:

- **Use case assessment** — Feasibility analysis and scope definition
- **Data preparation** — Feature engineering to support model development
- **Architecture selection** — Algorithm evaluation and comparison
- **Experiment tracking** — MLflow integration for reproducibility
- **Distributed training** — Approach for large datasets
- **Hyperparameter tuning** — Performance optimisation
- **Model validation** — Performance benchmarking and testing
- **Bias detection** — Fairness evaluation for responsible AI
- **Documentation** — Clear model lineage and reproducibility

Multi-cloud support across AWS, Azure, and Google Cloud.

2 Our Approach

We follow a structured ML development approach with reproducibility at every stage.

Development phases:

Phase	Activities
Assess	Use case feasibility, data availability, success criteria
Prepare	Data preparation, feature engineering, experiment setup
Develop	Model training, hyperparameter tuning, iteration
Validate	Performance testing, bias evaluation, documentation

Our focus: - Reproducible experiments through systematic tracking - Responsible AI through bias detection and fairness evaluation - Clear model lineage and documentation - Models prepared for deployment through separate MLOps service

We deliver models your team can understand and extend.

3 Getting Started

ML model development typically takes 6-12 weeks depending on complexity:

Phase 1: Assessment We assess use case feasibility, data availability, and define success criteria. We agree model objectives and evaluation metrics.

Phase 2: Preparation Data preparation, feature engineering, and experiment infrastructure setup.

Phase 2: Development Model training, hyperparameter tuning, and iterative improvement. We track experiments and document decisions.

Phase 3: Validation Performance benchmarking, bias evaluation, and documentation. We prepare model for deployment.

Prerequisites: - Defined use case with clear objectives - Access to training data - Cloud platform access for ML infrastructure - Success criteria and evaluation metrics

4 Your Responsibilities

To ensure successful service delivery, you will need to:

- Provide timely access to required resources, stakeholders, and information
- Make appropriate subject matter experts available for design and integration discussions
- Ensure business users are available for acceptance testing as agreed
- Procure necessary software licenses and subscriptions
- Empower your project team to make decisions in a timely manner
- Review and approve deliverables based on agreed acceptance criteria
- Provide access to training data and data documentation
- Define use case objectives and success criteria
- Ensure cloud platform access for ML development
- Participate in model evaluation and validation
- Approve model for controlled deployment

5 Security & Compliance

This service supports workloads classified up to **Official-Sensitive** where appropriate controls are in place.

Our security credentials:

- **ISO 27001:2013** and **ISO 9001:2015** certified
- **Cyber Essentials Plus** certified
- **75%+ of our team hold SC clearance**
- All access to customer environments is logged and auditable
- Data remains within UK regions unless explicitly agreed

We operate in alignment with GDS, NCSC, and CDDO security principles.

6 Support & Exit

Ongoing Support

- Dedicated Service Delivery Manager as your primary contact
- Regular service reviews with clear reporting on performance and incidents
- Defined change management aligned with ITIL best practices

Knowledge Transfer

We embed knowledge sharing throughout our engagement: - Documented runbooks and operational procedures - Regular knowledge sharing sessions with your team - Post-incident reviews that share learnings

Exit Process

When the engagement ends, we ensure an orderly transition: - Complete documentation of all configurations and procedures - Knowledge transfer sessions as required - 90-day standard notice period - No disruption to your services during handover

7 Why Appvia

We're a UK-based SME with deep expertise in cloud platforms and a strong track record delivering for UK government.

Cloud Partnerships

- AWS Advanced Tier Services Partner & Public Sector Partner
- Microsoft Azure Solutions Partner
- Google Cloud Partner

Open Source Credentials

- Creators of Terranetes (CNCF project for Terraform on Kubernetes)
- Developers of Wayfinder, a self-service cloud platform

Public Sector Experience

We understand the unique requirements of government and public sector organisations, from security clearance to GDS service standards.

"Appvia have helped us realise our cloud-first strategy with excellent product solutions. The security, governance and peace of mind brought in by the cloud landing zone has dramatically accelerated our journey to cloud-native adoption."

— **Peter Macchiocci**, Bank of England, Head of Platform Engineering

8 Contact Us

To discuss your requirements or request a detailed proposal, contact our Public Sector Team.

Phone: 020 3917 2888

Email: sales@appvia.io

Website: www.appvia.io

When you get in touch, please include: 1. The name of this service 2. Your organisation name 3. Your contact details 4. A brief description of your requirements

We'll arrange a discovery call to understand your needs and provide a tailored response.

Appvia helps organisations build, secure, and innovate across cloud, data platforms, and AI by blending practical engineering expertise with real-world experience.



About Appvia

Appvia helps organisations build, secure, and innovate across cloud, data platforms, and AI by blending practical engineering expertise with real-world experience. Drawing on our background in creating open source CNCF projects like Terranetes and our self-service developer platform, Wayfinder, we bring that industry know-how and expertise into your organisation to help unlock the true value of the Cloud. As an AWS Advanced Tier Partner and a Microsoft Solutions Partner, we specialise in delivering secure, scalable cloud-native platforms and services, including containerisation, FinOps, modernisation, and AI integration.

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