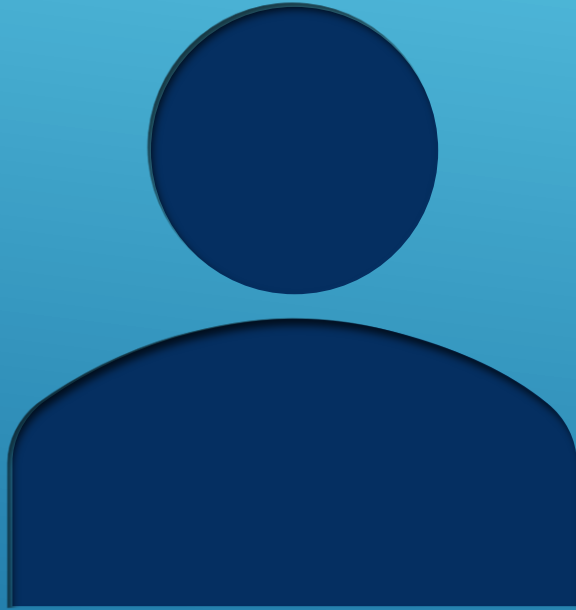




NETCELL-EDA Architecture

AI Model Governance Framework

NETCELL-EDA Architecture

AI Model Governance Framework

1. Purpose

This policy defines how machine learning models are developed, validated, deployed, monitored, and retired within Netcell-EDA. It ensures consistency, safety, transparency, and compliance across all tenants and environments.

2. Scope

This policy applies to:

All ML models used for profiling, scoring, inference, or analytics

All environments (dev, staging, production)

All tenants

All data science and engineering teams

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AI Model Governance Framework

3. Roles & Responsibilities

Data Science Team

Develops and trains models

Performs validation and drift analysis

Publishes models to the Model Registry

ML Engineering Team

Integrates models into the Inference Service

Ensures performance, latency, and scalability

Manages deployment pipelines

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AI Model Governance Framework

3. 1

Architecture Team

Defines standards for model interfaces

Approves new model types

Oversees governance compliance

DevOps Team

Manages infrastructure

Ensures reliable deployment and rollback

Monitors runtime performance

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AI Model Governance Framework

4. Model Lifecycle Requirements

4.1 Model Development

Must use approved training datasets

Must document feature definitions

Must include reproducible training scripts

Must follow versioning conventions (e.g., contact-score-v1.2)

4.2 Model Validation

Must pass accuracy, precision, recall, and bias checks

Must include confusion matrix and ROC analysis

Must be validated against multiple tenants (if applicable)

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4.3 Model Registry

Every model must be registered with:

Version

Owner

Training dataset reference

Validation report

Deployment status

Rollback version

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4.4 Deployment

Only models with “Approved” status may be deployed

Deployment must be automated via CI/CD

Canary or A/B rollout required for major versions

4.5 Monitoring

Latency

Throughput

Error rates

Drift detection

Feature distribution changes

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4.6 Retraining

Triggers for retraining:

Drift threshold exceeded

Performance degradation

New tenant onboarding

New features added

4.7 Retirement

Models must be retired when:

Superseded by newer versions

Failing validation

No longer relevant to business logic

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5. Compliance & Audit

All models must have audit logs

All predictions must be traceable to model version

All training datasets must be archived

Quarterly governance review required

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Thanks

The background of the slide is a blue gradient, transitioning from a lighter blue at the top to a darker blue at the bottom. On the right side, there are several parallel white diagonal lines that extend from the bottom towards the top right corner, creating a sense of movement and modern design.