

# ClearScape Analytics ModelOps 7 Overview

# ClearScape Analytics ModelOps

End-to-end lifecycle management and governance of AI/ML models

## Feature catalog

Improve data preparation productivity by using Feast (open-source feature store) connector to Teradata to reuse features across models

## Model deployment

Efficiently move analytical models from labs into production with no-code validation and monitoring; now compatible with SAS

## Lifecycle management

Simplify model lifecycle management by enabling reusability and explainability

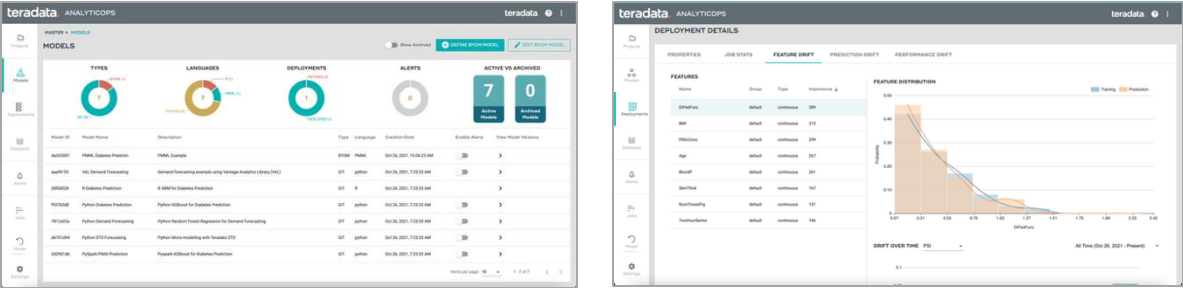
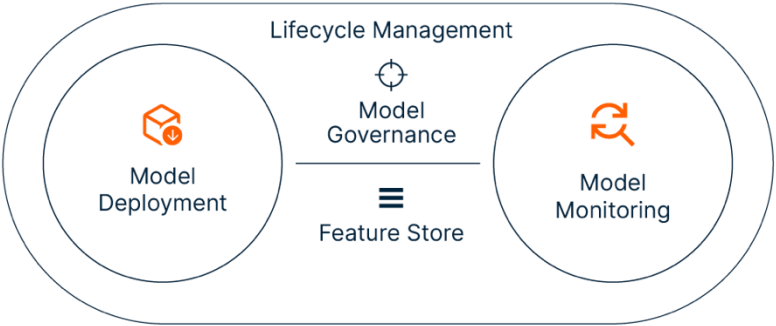
## Model governance

Enable robust governance that ensures transparency, auditability, and compliance throughout the model lifecycle

## Model monitoring

Automatically monitor model performance and feature drift with zero configuration alerts

## ModelOps automation capabilities



# ModelOps Capabilities

## Model Deployment

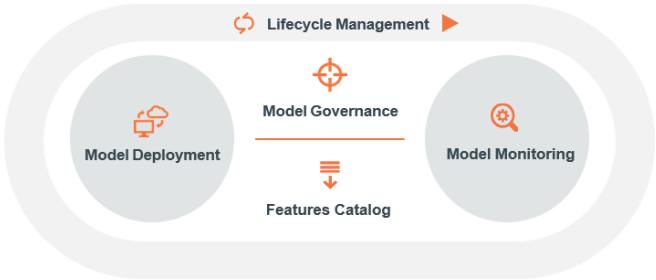
## BYOM no Code

## In-database functions

## Open Analytics

## Model Governance

## ClearScope Analytics ModelOps Capabilities



## Feature Catalog

Preview data

ENTITY & TARGET QUERY PREVIEW

ENTITY, FEATURE & TARGET QUERY PREVIEW

Query

```
1 SELECT F."PatientId", F."NumTimesPrg", F."PglcConc", F."BloodP", F."SkinThick", F."TwoHourSerins", F."BMI", F.  
2 "DiPedFunc", F."Age", E."HasDiabetes"  
3 FROM (SELECT * FROM pe186005.pima_patient_features) F  
4 ON F."PatientId" = E."PatientId"
```

PatientId	NumTimesPrg	PglcConc	BloodP	SkinThick	TwoHourSerins	BMI	DiPedFunc	Age	HasDiabetes
273	1	71	78	50	45	33.2	0.422	21	0
699	4	118	70	0	0	44.5	0.904	26	0
451	1	71	62	0	0	21.8	0.416	26	0
568	4	154	72	29	126	31.3	0.338	37	0
392	1	131	64	14	415	23.7	0.389	21	0

10 records sample

## Lifecycle Management

ModelOps

PROJECTS > MODELS > PYTHON DIABETES PREDICTION > LIFECYCLE

< | MODEL VERSION

LIFECYCLE

IMPORT > EVALUATE > APPROVE > DEPLOY > RETIRE

Guidance to complete the step

- Ensure Deployment job progress is completed
- Add Deployment job details including Description and Tags

EVALUATE > DEPLOY > RETIRE

MODEL VERSION DETAILS

VIEW MODEL DRIFT VIEW MODEL HISTORY

Model Version

Model Version ID: 270a454

Created at: Sep 19, 2022, 9:34:59 PM

User: Public.Excort@teradata.com

Status: Deployed

Tags:

EVALUATION DETAILS

Job ID: 5739048 Status: Evaluated Dataset ID: 52bcb3c User: public.exccort@teradata.com Date: Sep 20, 2022, 6:29:38 PM VIEW REPORT

EVALUATION DETAILS

Job ID: 36534fe Status: Evaluated Dataset ID: 52bcb3c User: public.exccort@teradata.com Date: Sep 20, 2022, 6:28:48 PM VIEW REPORT

DEPLOYMENT DETAILS

Job ID: 58c3380 Status: Deployed Engine Type: In-warehouse User: public.exccort@teradata.com Date: Sep 19, 2022, 10:55:09 PM

## Model Monitoring

PROJECTS > MODELS > PYTHON DIABETES PREDICTION > 88B2E486 > MODEL DRIFT

< | MODEL MONITORING

EVALUATE MODEL VERSION RETIRE MODEL VERSION

FEATURE DRIFT PREDICTION DRIFT PERFORMANCE DRIFT

FEATURE

Name	Group	Type	Importance	PSI Drift Value
bloodp	default	continuous	98	0.442
pglcconc	default	continuous	155	0.331
bmi	default	continuous	141	0.208
skinthick	default	continuous	67	0.206
dipedfunc	default	continuous	167	0.198
numtimesprg	default	continuous	63	0.141
age	default	continuous	119	0.128
twohourserins	default	continuous	36	0.028

Show Drifting Only

FEATURE DISTRIBUTION

Probability

bloodp

Training Production

# ClearScape Analytics ModelOps

## Main Features and capabilities



### End-to-End Model Lifecycle Management

- Standardize the entire AI/ML lifecycle and enable collaboration across teams
- Offers various interfaces suitable for different user roles, including easy-to-use no-code interfaces for business analysts
- A development toolkit for data scientists, and an operational dashboard for IT teams to ensure a seamless experience throughout the entire deployment process



### Automated deployment

- With ClearScape Analytics ModelOps, you can now **deploy in days instead of months**.
- It is a ready-to-go solution that provides an automated way to validate and deploy models
- Efficiently move your models from the lab into your chosen production environment and reduce the time it takes to generate business value from your AI/ML investments



### Model Monitoring

- Provides data scientists with a single view for continuous and automated monitoring of data drift and model performance
- Addresses IT teams' concerns by applying the same enterprise policies of the data warehouse to models in production, including data quality compliance, integration with other services and APIs, performance monitoring, availability monitoring, and access controls

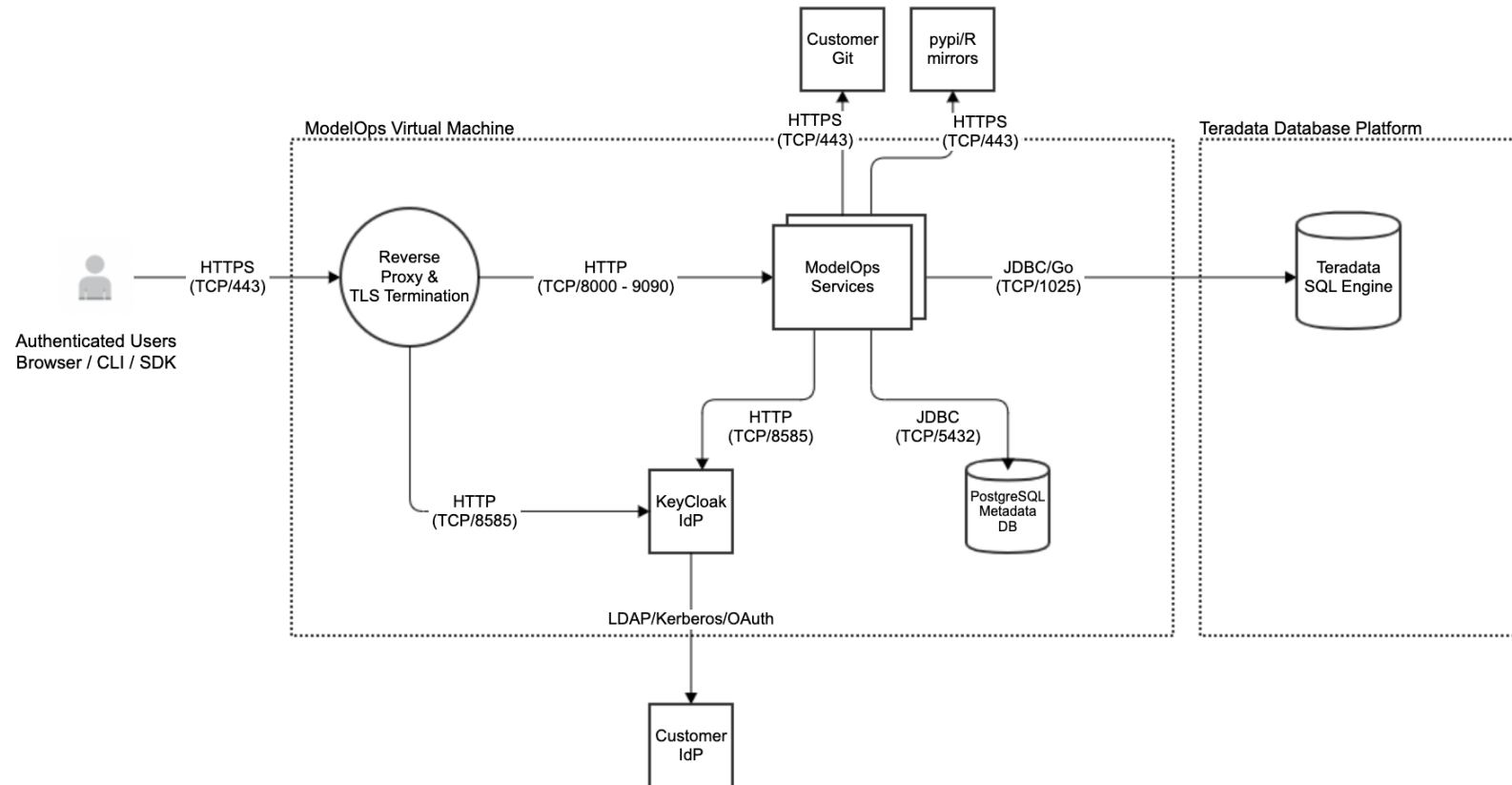


### Governance for Responsible AI

- Provides a simple user interface showing a wealth of information on all models across the AI lifecycle
- Automatically provides detailed audit chains for every dataset used on every model job
- Makes Model Governance effective and easy to implement

# Model Ops Architecture

# ModelOps Architecture on Customer VM





# Additional Information

Official docs documentation site - [link](#)

ModelOps Quickstarts: [BYOM](#) , [GIT](#) & [Airflow workflows](#)

ClearScape Analytics ModelOps Brief - [link](#)

ClearScape Analytics ModelOps Whitepaper - [link](#)



**ModelOps 5-minute video**

**Open to all your users:**

ClearScape Analytics Experience: <http://clearscape.teradata.com/sign-in>

*Demo environment with Vantage Express, Jupyterlab, and ModelOps for 40 hours per month*

**teradata.**