ORACLE

Oracle Autonomous Database Update

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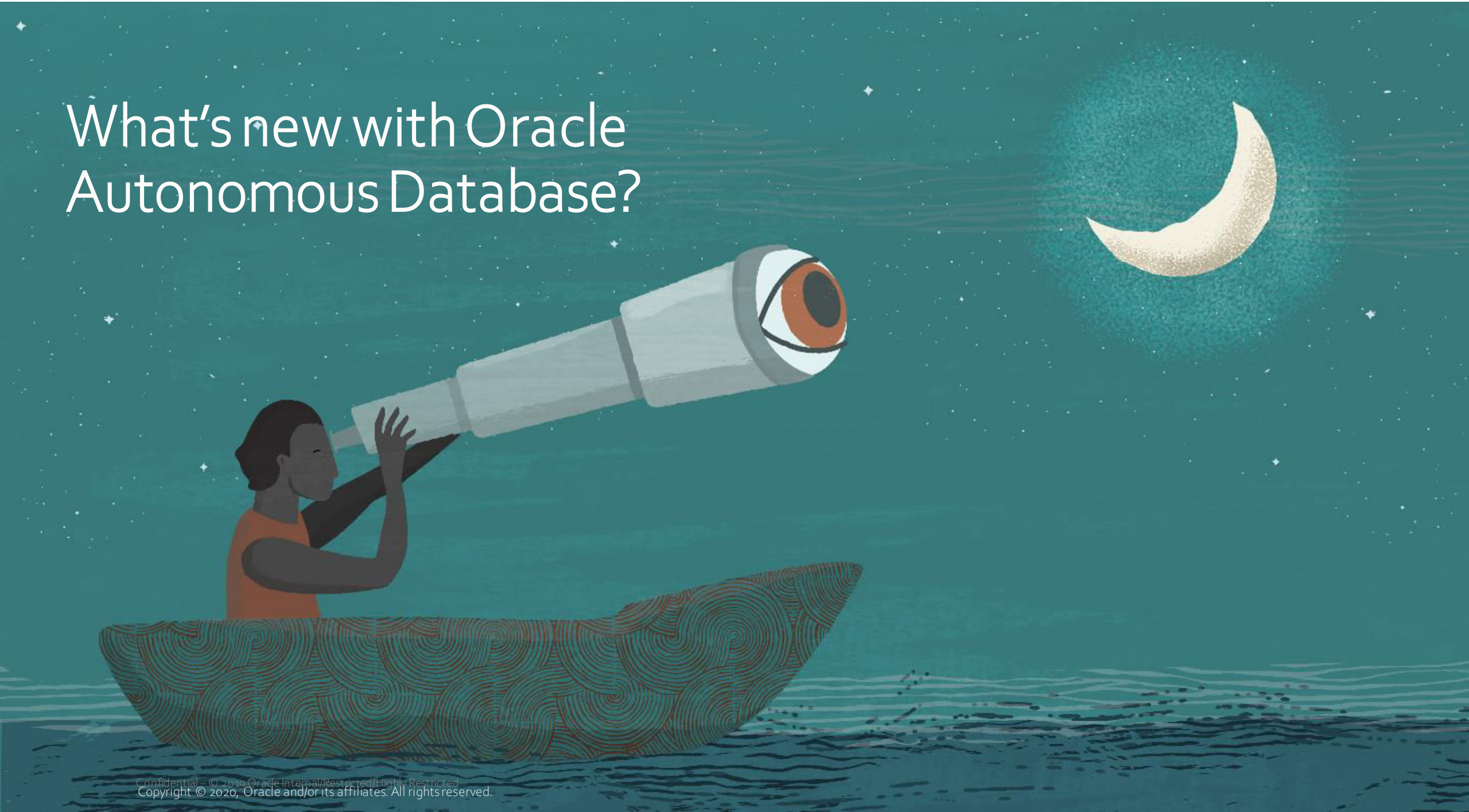
What's new with Oracle Autonomous Database?



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Autonomous Database: Recent New Features

March	April	May	June	July	August
Private Endpoints	Per-second billing	19c One-Click Upgrade	Autonomous Cloud@Customer	Autonomous Data Guard	Autonomous JSON Database
APEX 19.2	JSON Document API (SODA) Support	99.95% Service Level Agreement	Customer Managed ORDS	Oracle Apps Certifications	Support for more object stores (GCP, Wasabi)
Database Restart	Extensions for IDEs			APEX 20.1	

Sept	Oct	Nov	Dec	Jan-21	Feb-21
Refreshable Clone	Oracle Cloud SDK for PL/SQL	19c Upgrade Completed	APEX Service	Built-in Tools: Business Model	Machine Learning for Python
SQL Macros	Integration with OCI events	Built-in Tools: Data Load, Data Catalog	Support for Golden Gate Capture	Query to Big Data Service (Hadoop)	Machine Learning: AutoML
			21c available on Free Tier		Built-in Tools: Data Transforms

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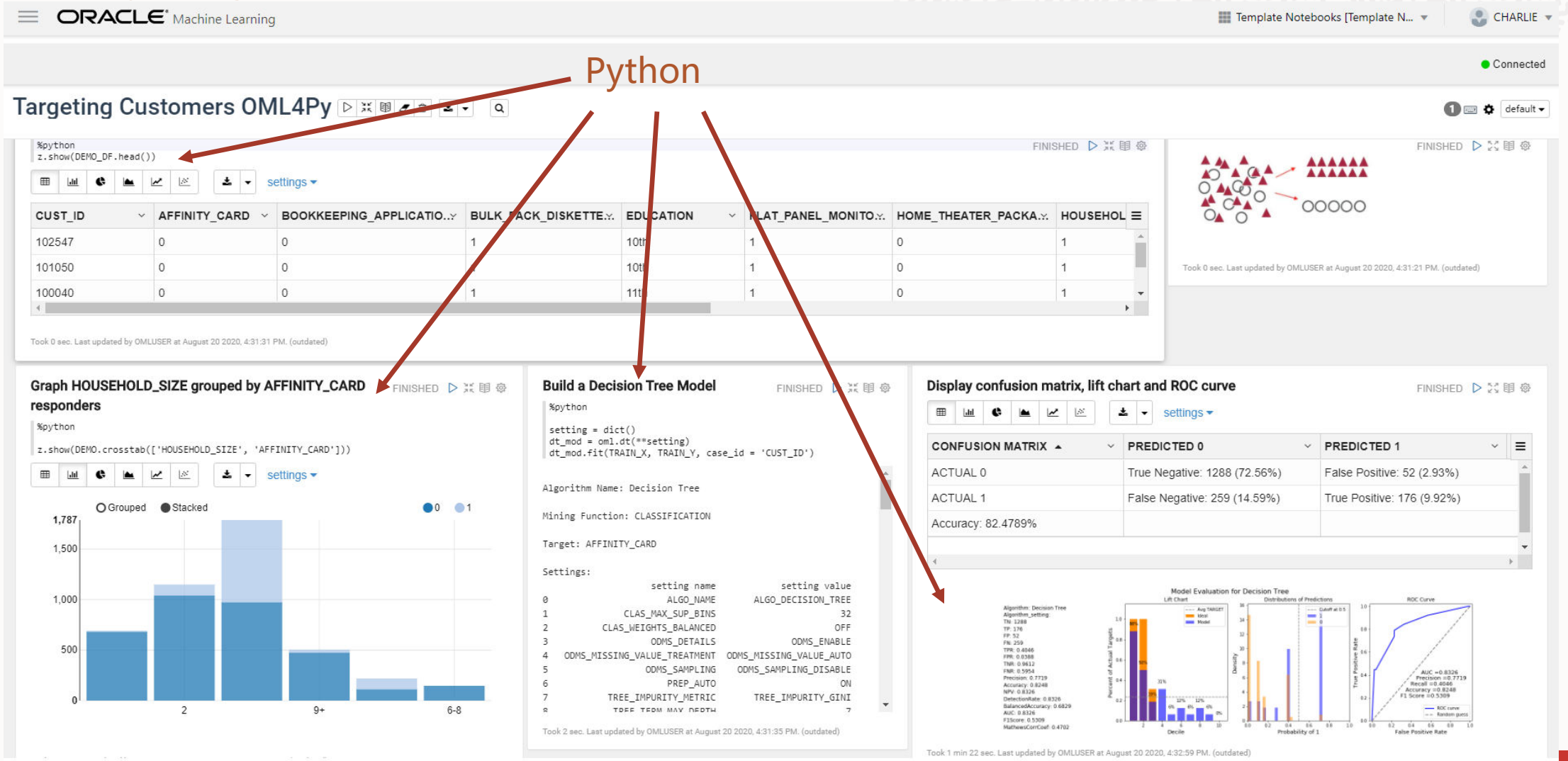
Oracle Machine Learning

OML4Py Integration Added to OML on Autonomous Database



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Oracle Machine Learning for Python

Integration with Open Source Python

Transparency layer

- Use familiar R/Python syntax to manipulate database data

Parallel, distributed algorithms

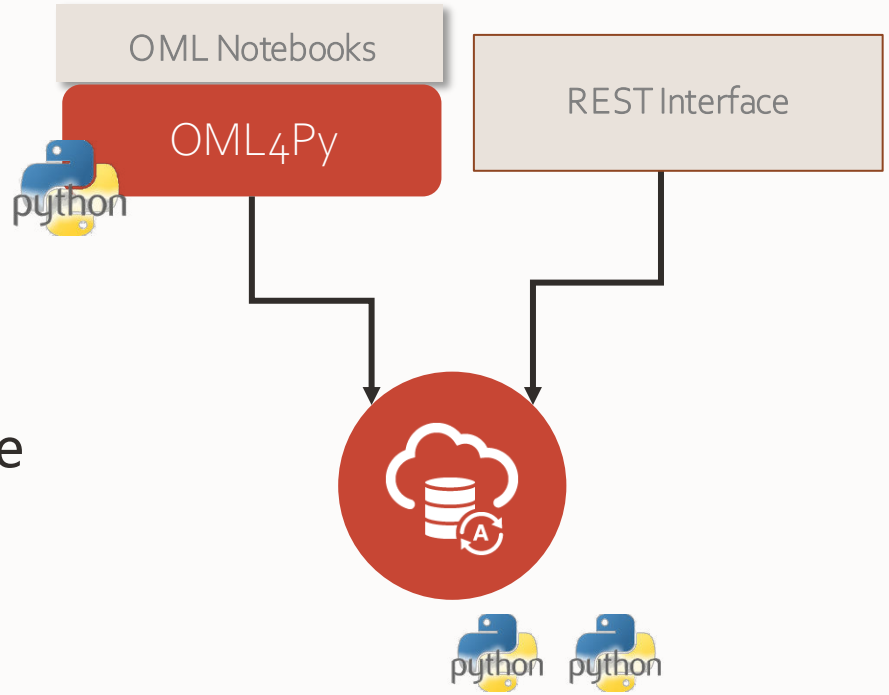
- Use in-database algorithms from Python API
- Scalability and performance

Embedded execution

- Manage and invoke Python scripts in Oracle Database
- Use open source packages to augment functionality

OML4Py, Automated Machine Learning - AutoML

- Algorithm selection, feature selection, auto tune hyperparameters



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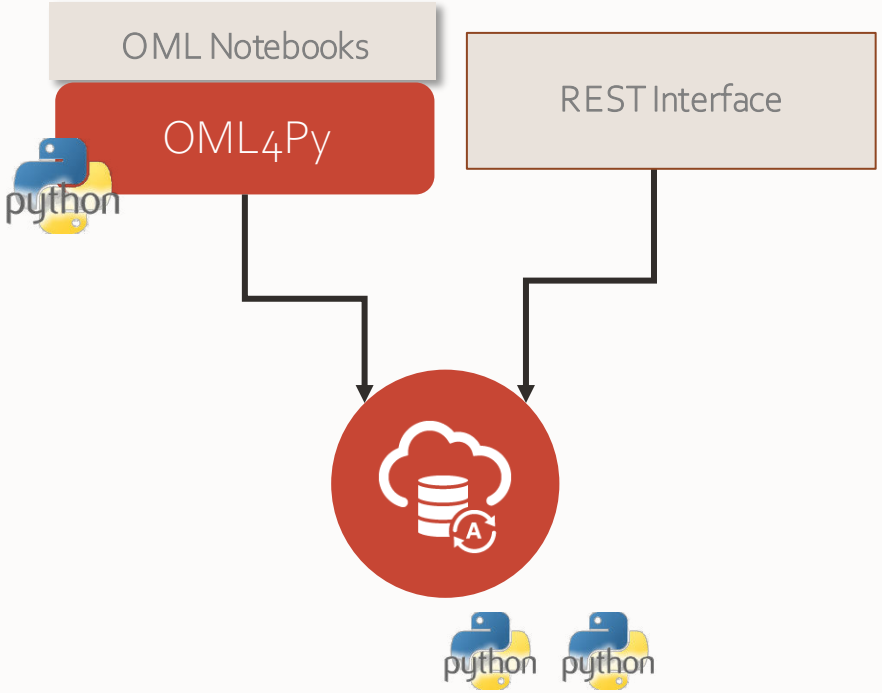
Oracle Machine Learning for Python

Integration with Open Source Python

OML4Py details and supported packages

- Python 3.8.2
- cx_Oracle
- cycler
- joblib
- kiwisolver
- matplotlib
- numpy
- pandas
- Pyparsing
- python_dateutil
- pytz
- scikit-learn
- scipy
- six
- setuptools



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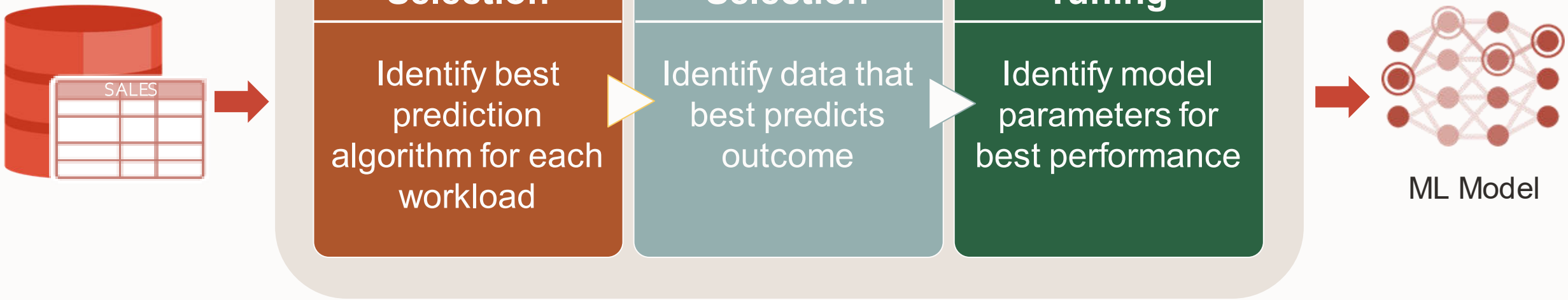
AutoML

Faster and Easier Machine Learning for Data Scientists and Developers



ENABLES NON-EXPERT USERS TO LEVERAGE MACHINE LEARNING

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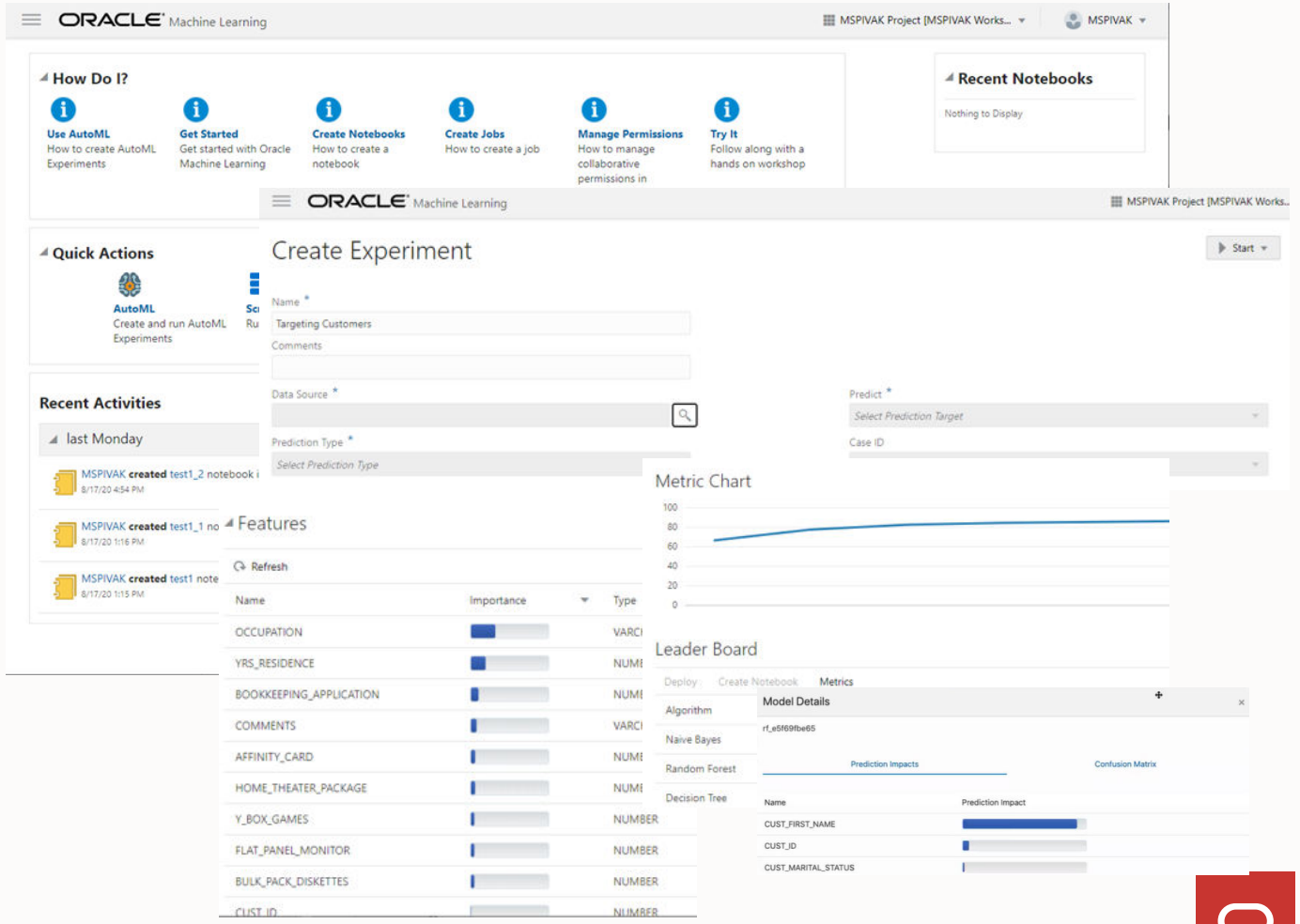
Coming Soon! | OML AutoML UI

"Code-free" AutoML based UI supporting automated end-to-end ML

Targets: Citizen Data Scientist, Data Scientists and Appl Developers

Key Features

- Intuitive, easy to use
- Minimal user input: data, target
- Automates ML steps
- Make ML simpler



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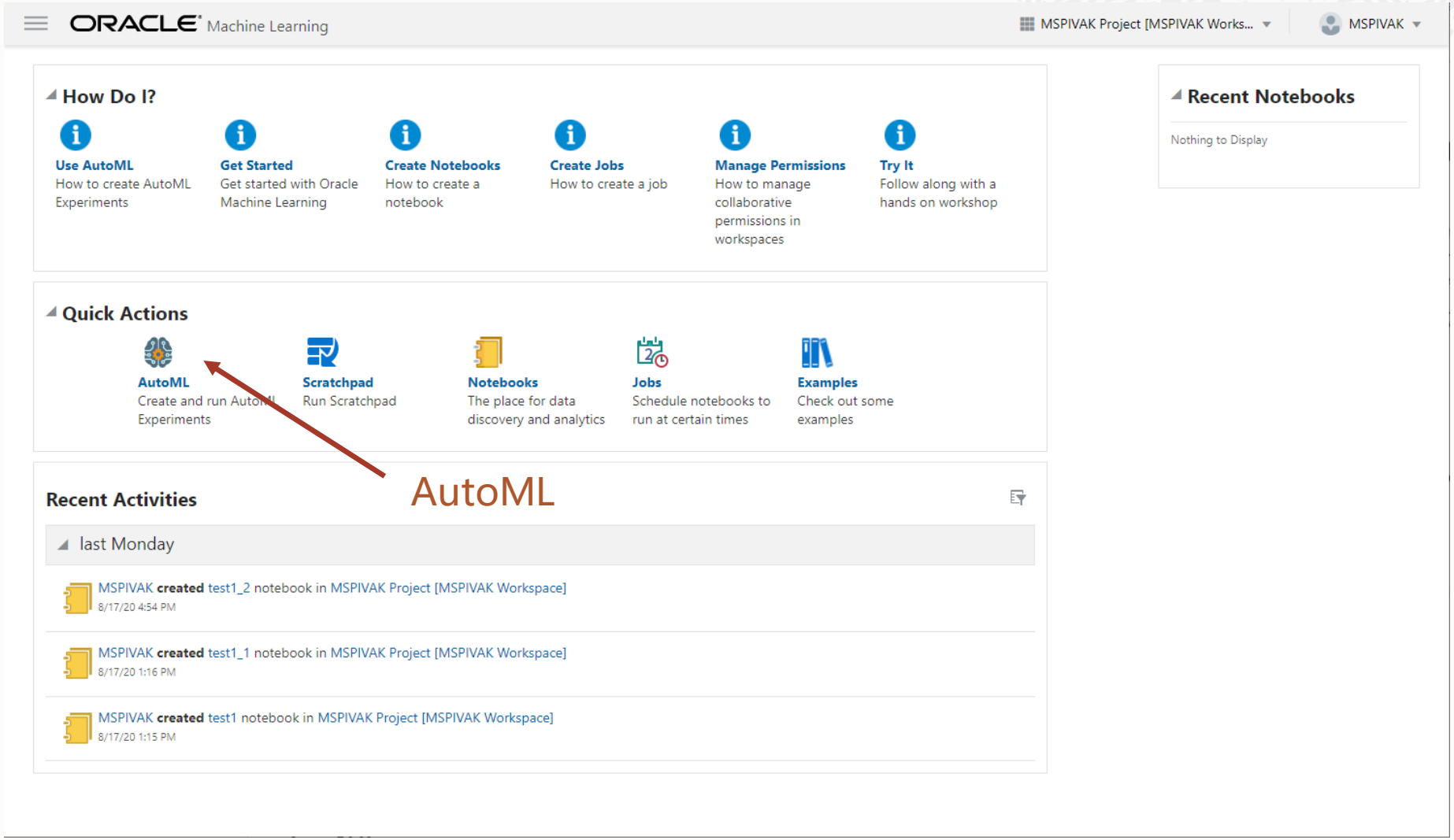

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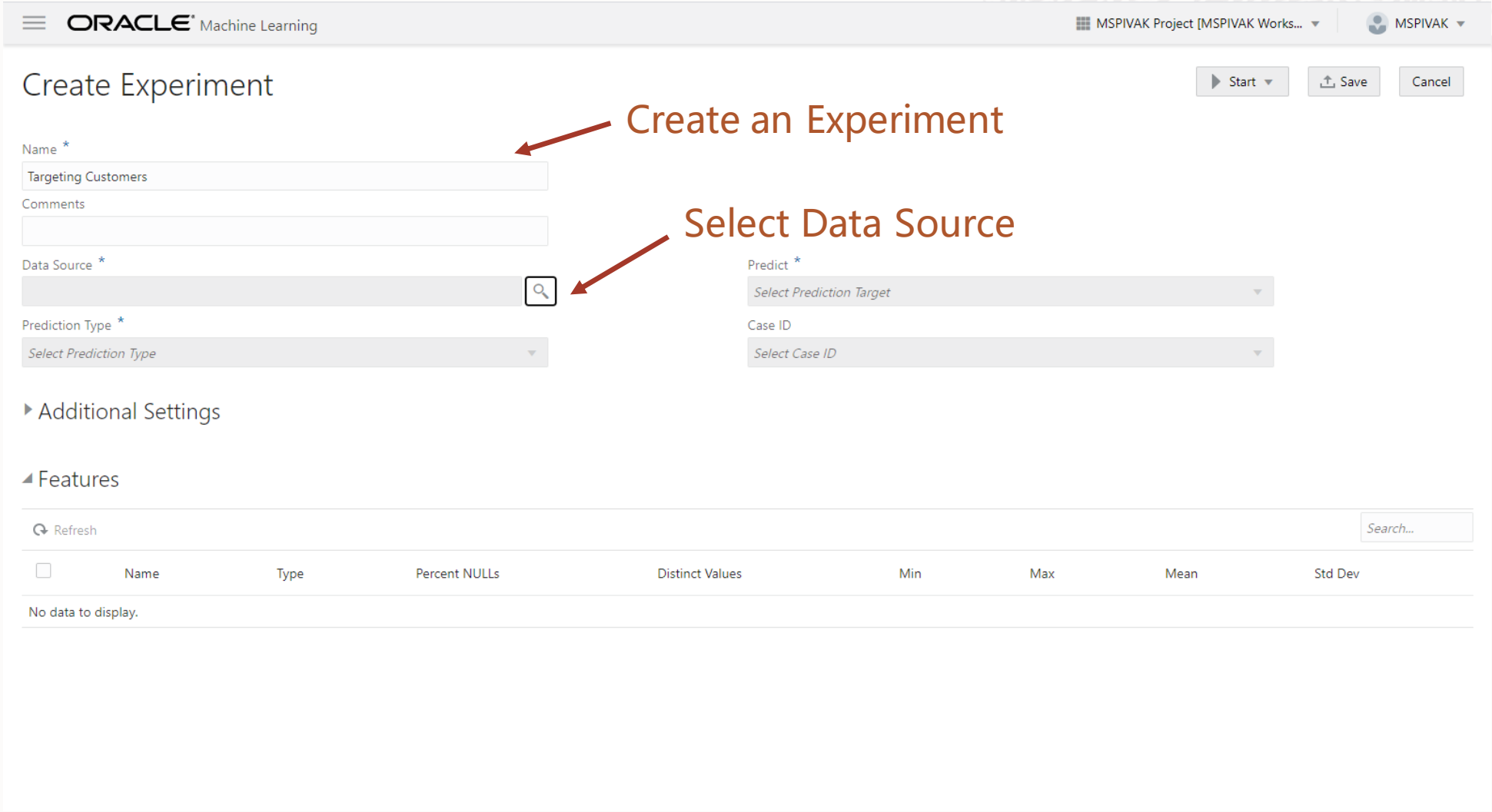

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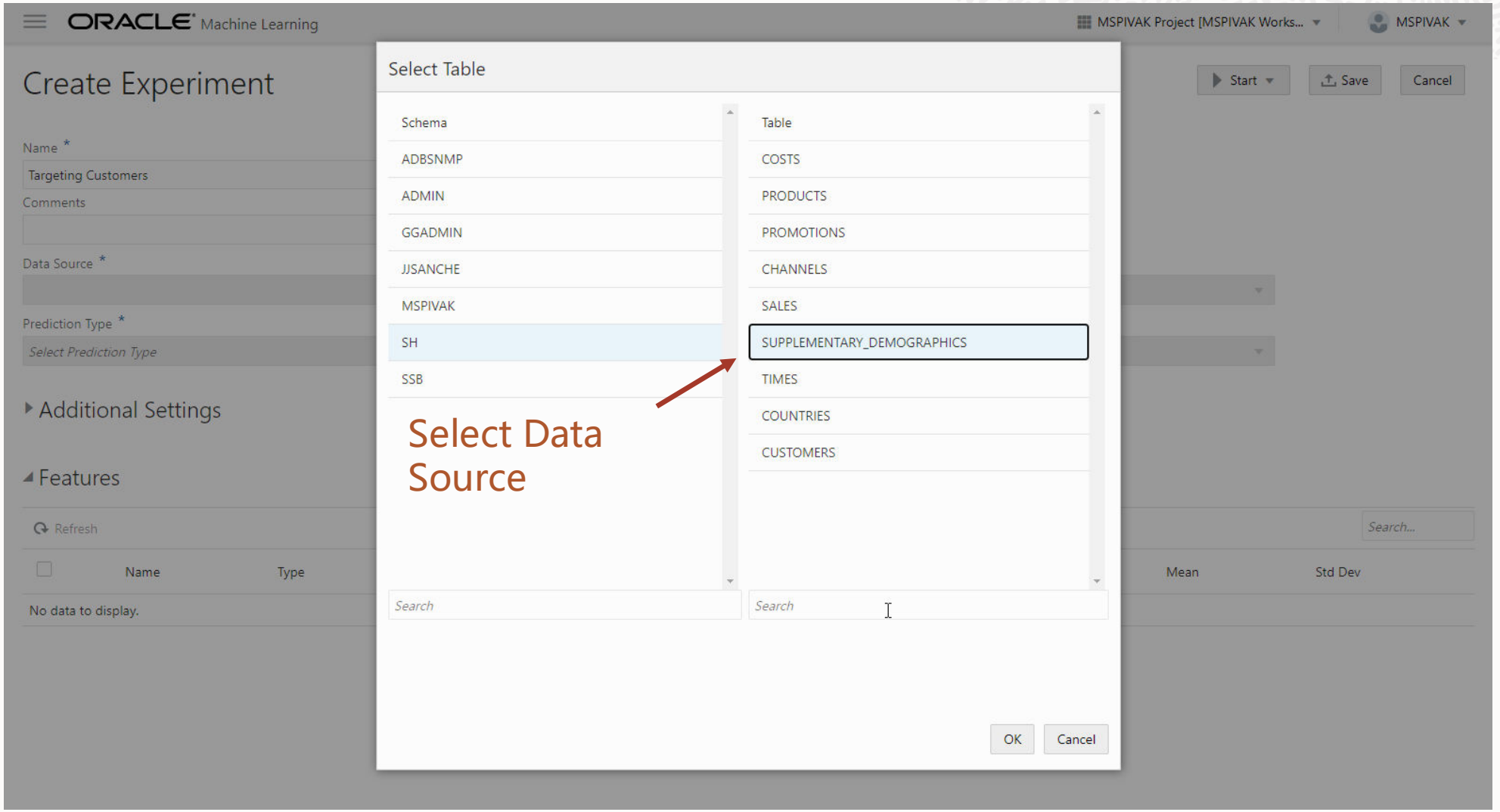

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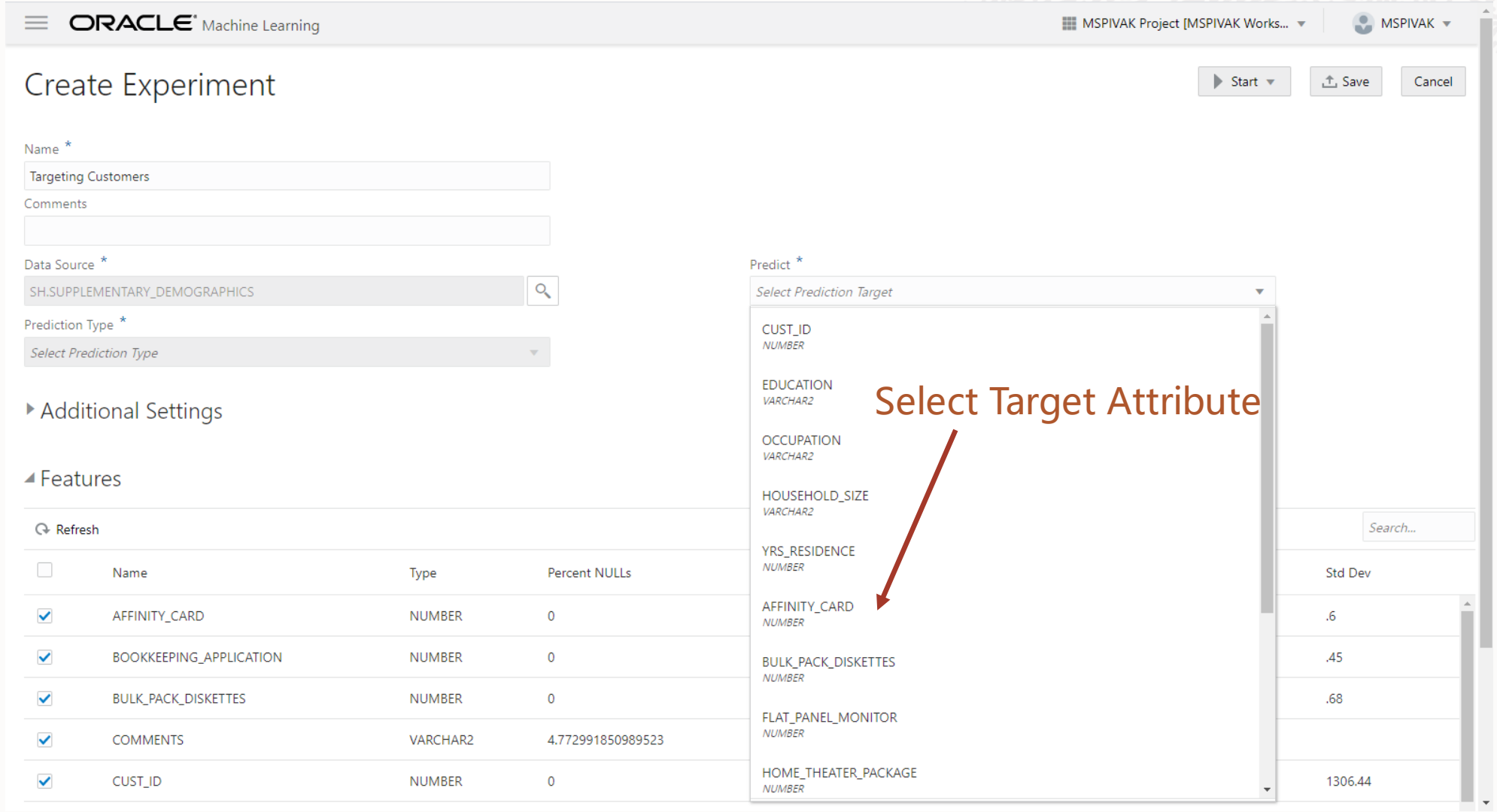

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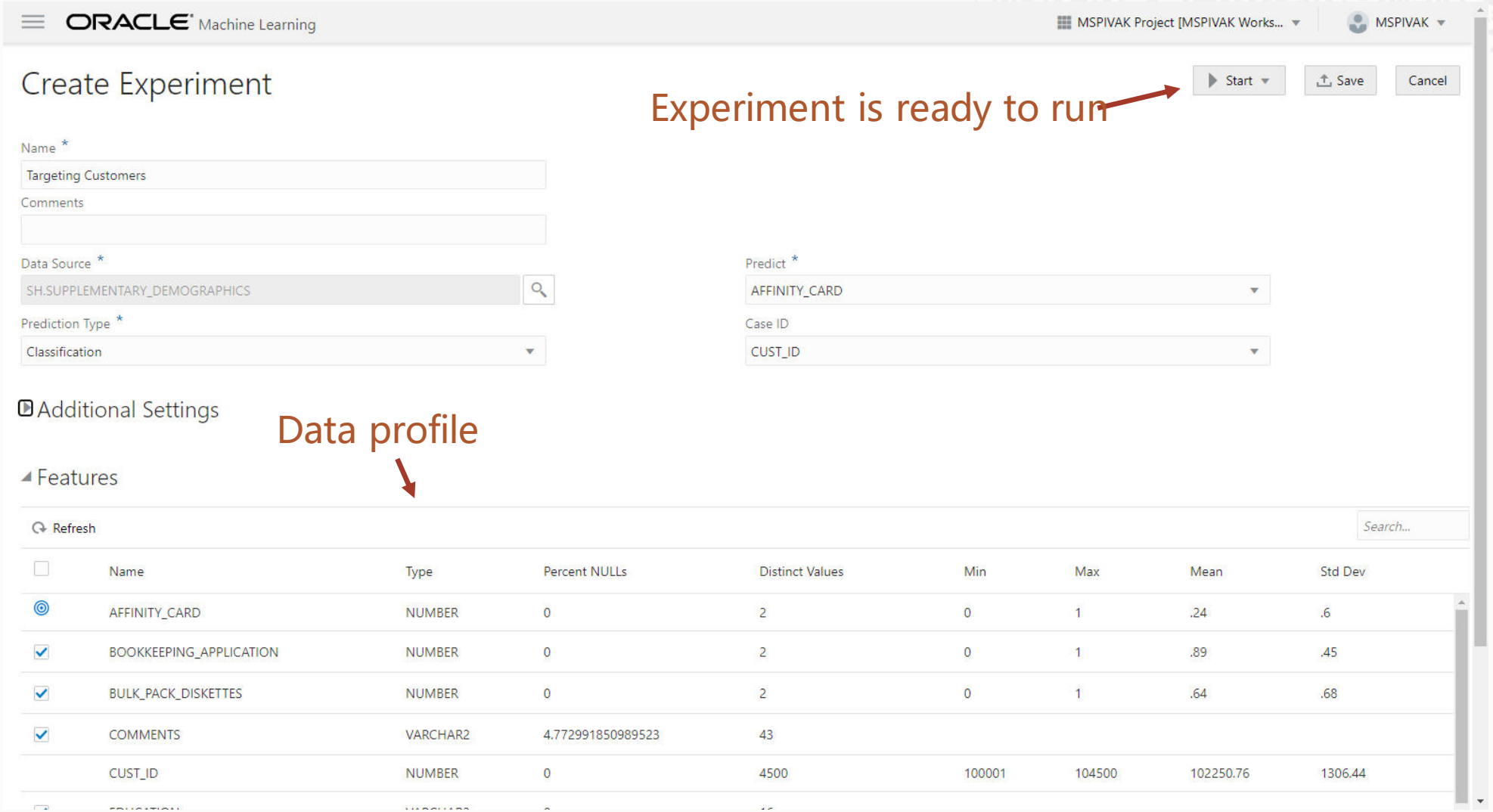

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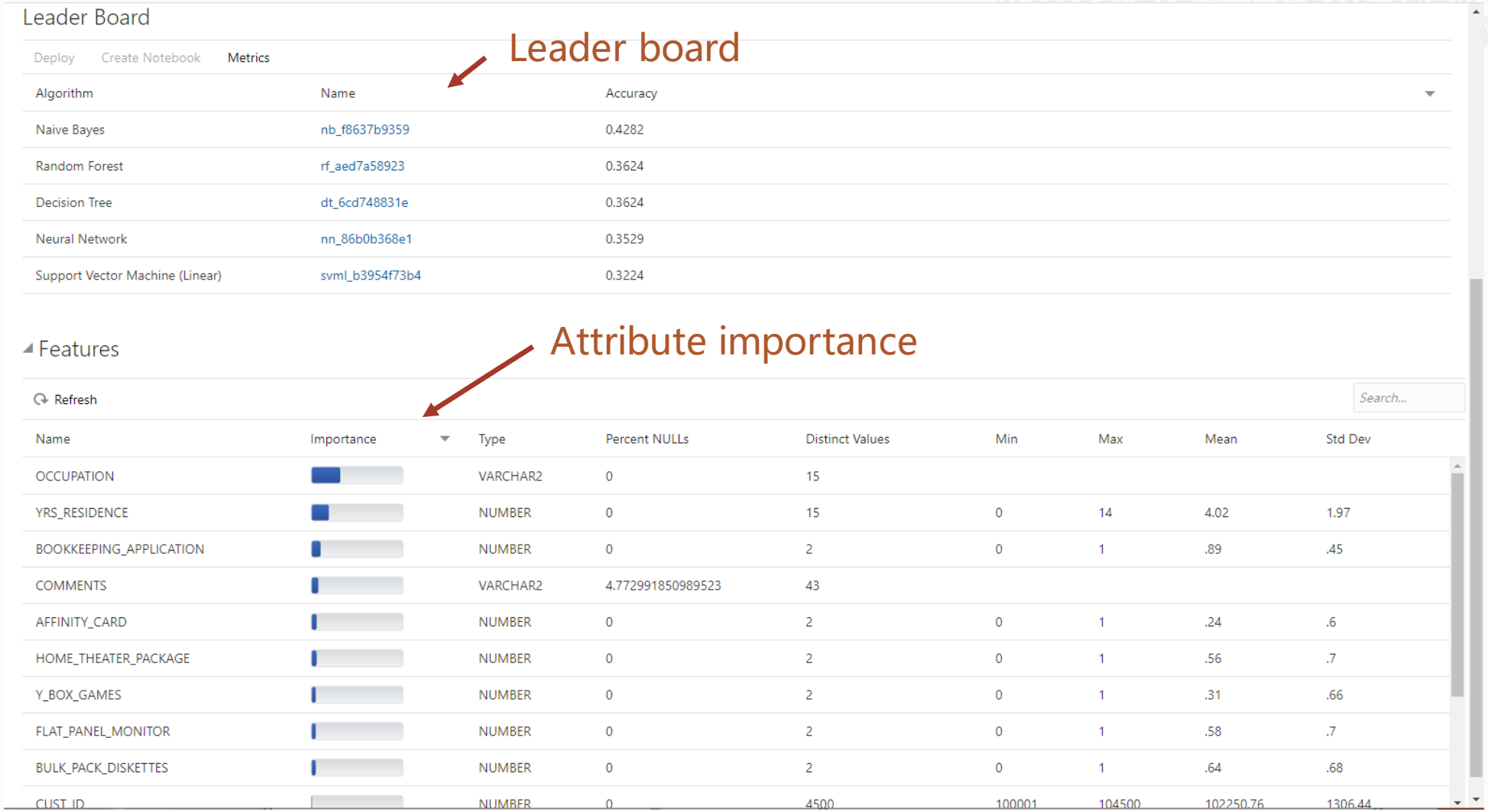

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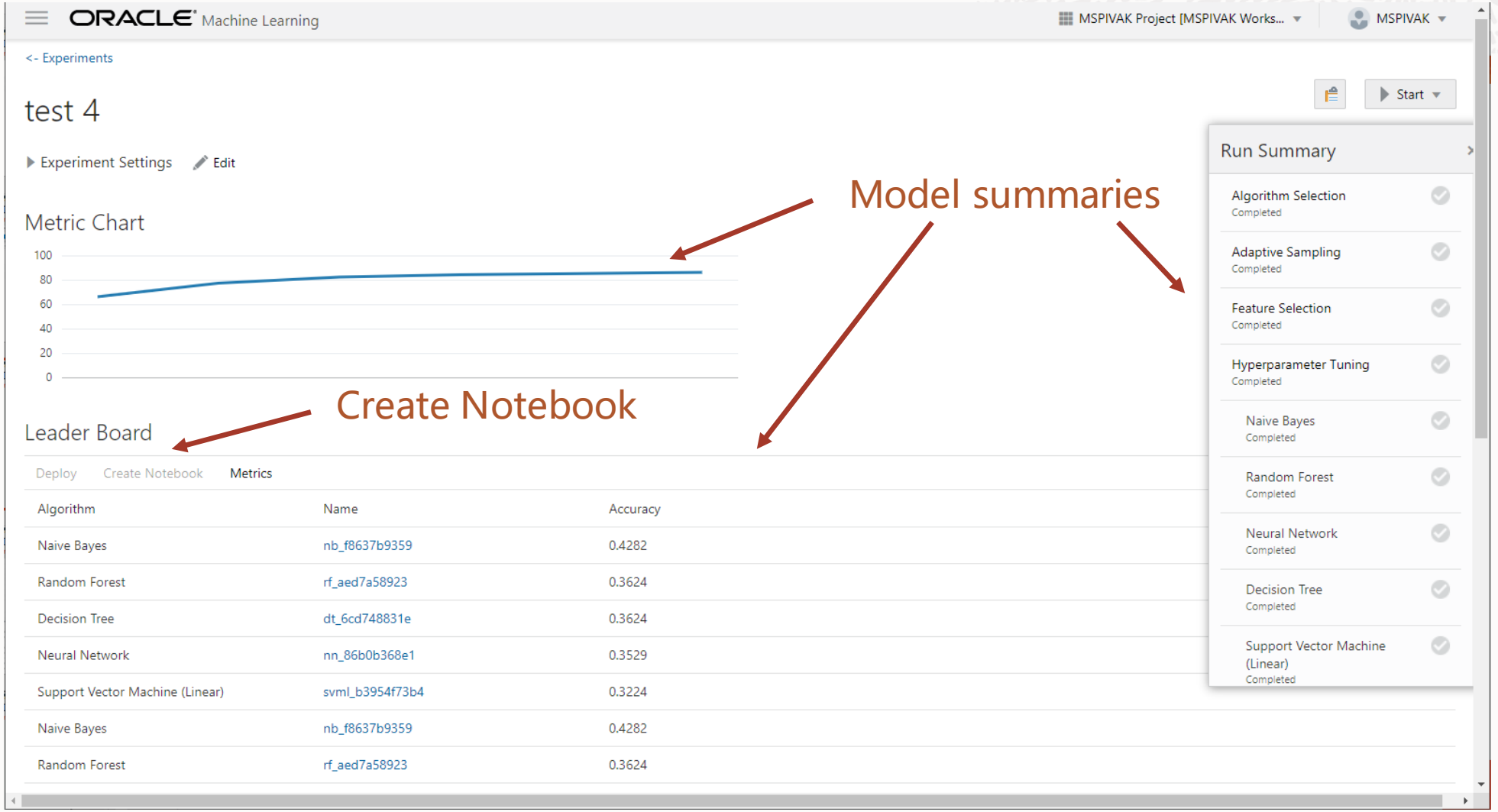

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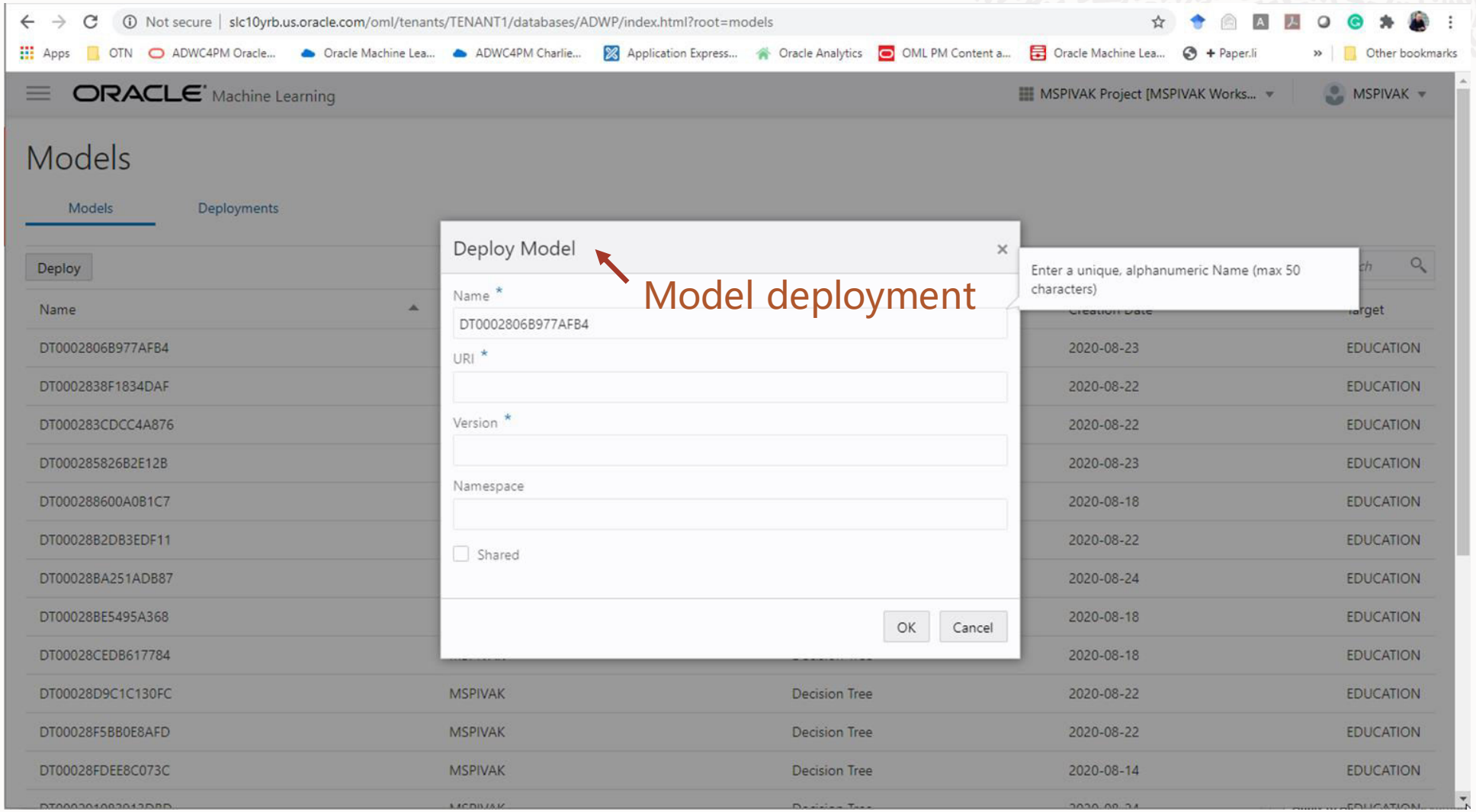

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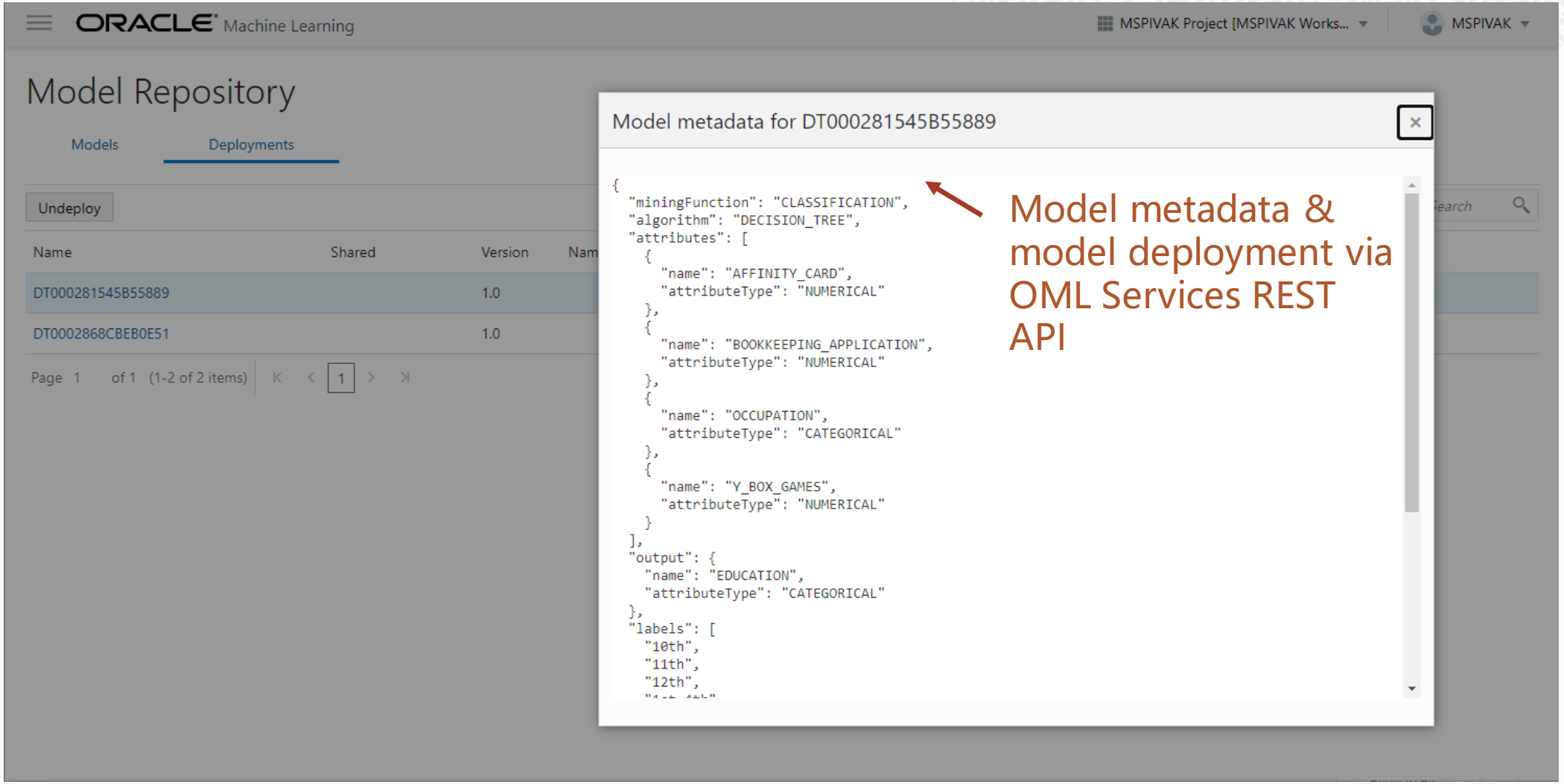

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"Just a quick feedback on the ADW 18c to 19c upgrade. Have a BI dude at a customer site who cloned his ADW and upgraded while cloning. Tested OAC all good. Now this might not be such a big deal - but it is a big deal. No DB experience whatsoever, cloned and upgraded. Easy as that. Thank you, this is brilliant!"

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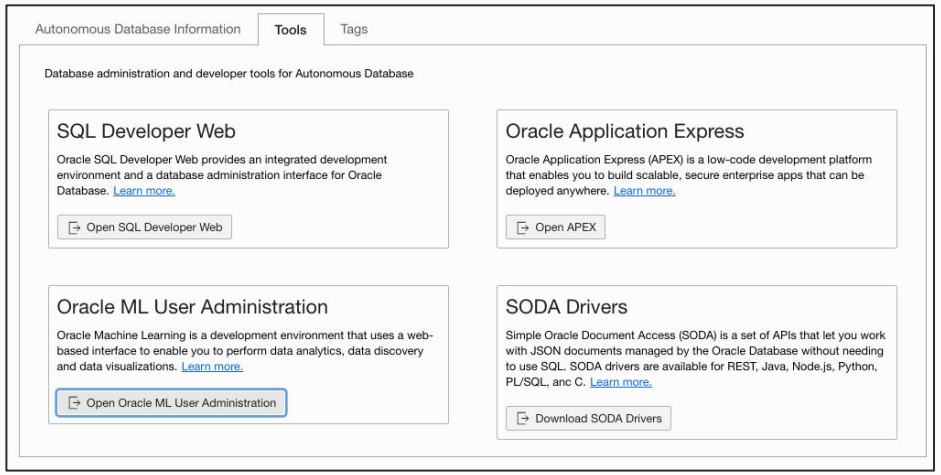
Available today

Evolve to become a unified data management platform

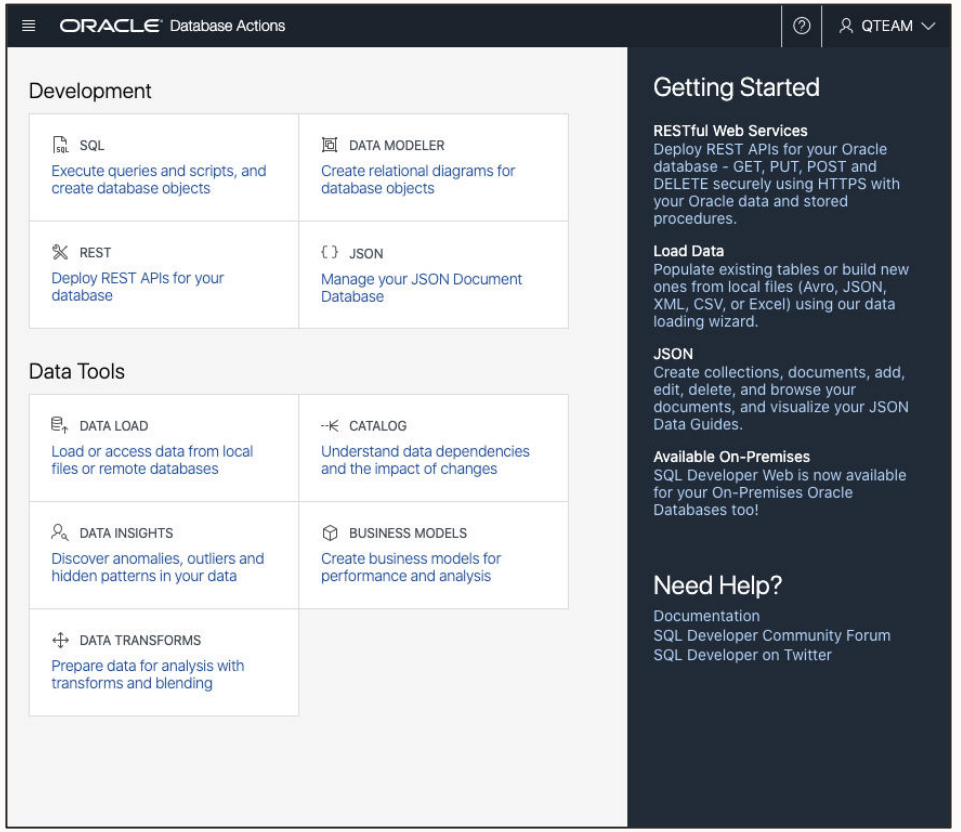
ADB yesterday

- A handful of integrated tools



Autonomous Database today

Broad set of data management tools



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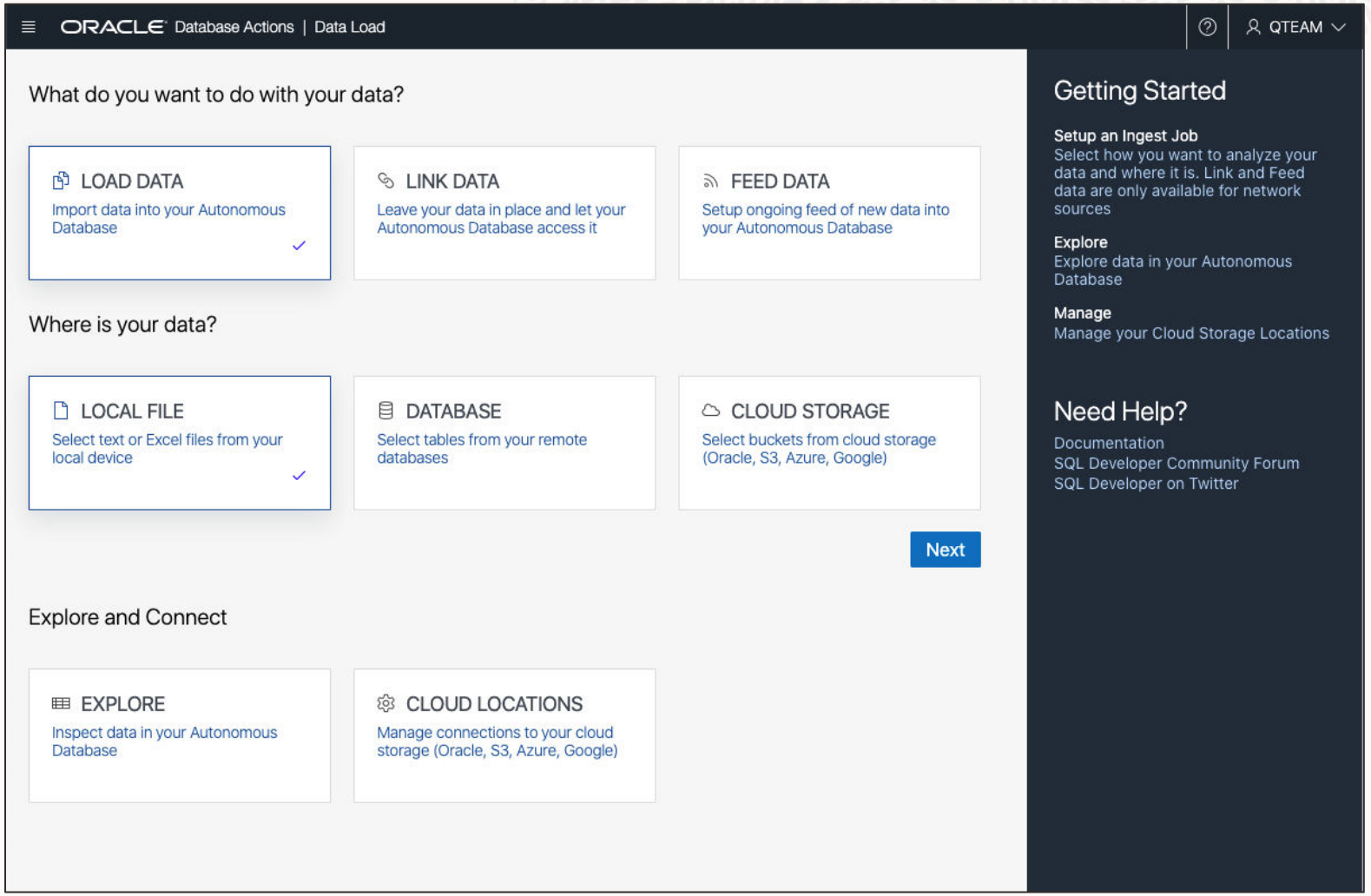
Data Load

Simple "drag-and-drop" data loading

- Files on local computer
- Files in Object Storage (including AWS S3 & Azure Blob Storage)
- Oracle Databases (on-premises and in cloud)



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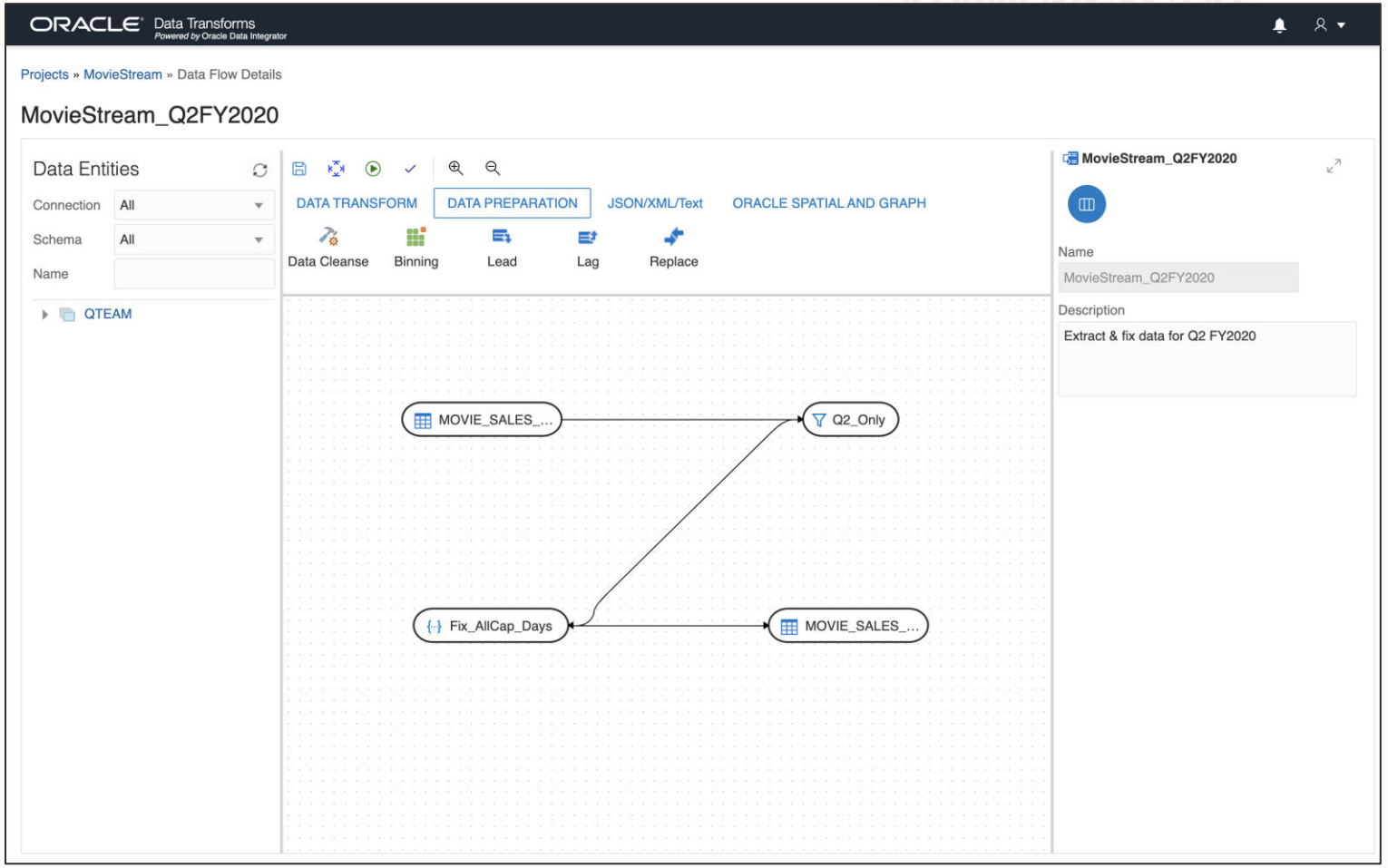
Data Transforms

Simple "drag-and-drop" data transformations

- Auto code generation for all ODI sources and targets including Fusion and Salesforce
- Built-in data quality

Based upon Oracle Data Integrator

- New, easy-to-use-cloud UI
- Simple migration to ADB for ODI customers
- Exposes all built-in database operators



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Modern Data Warehouse
Components

DATABASE

Autonomous, self-driving, self-securing, self-repairing

INTEGRATION

Streaming, batch data, both on-premises and in the cloud

DATA LAKE

Object storage-based data lake, integrated access with DW

DATA SCIENCE

Machine learning general purpose and in-database

ANALYTICS

ML-based analytics and visualization; Automatic narration

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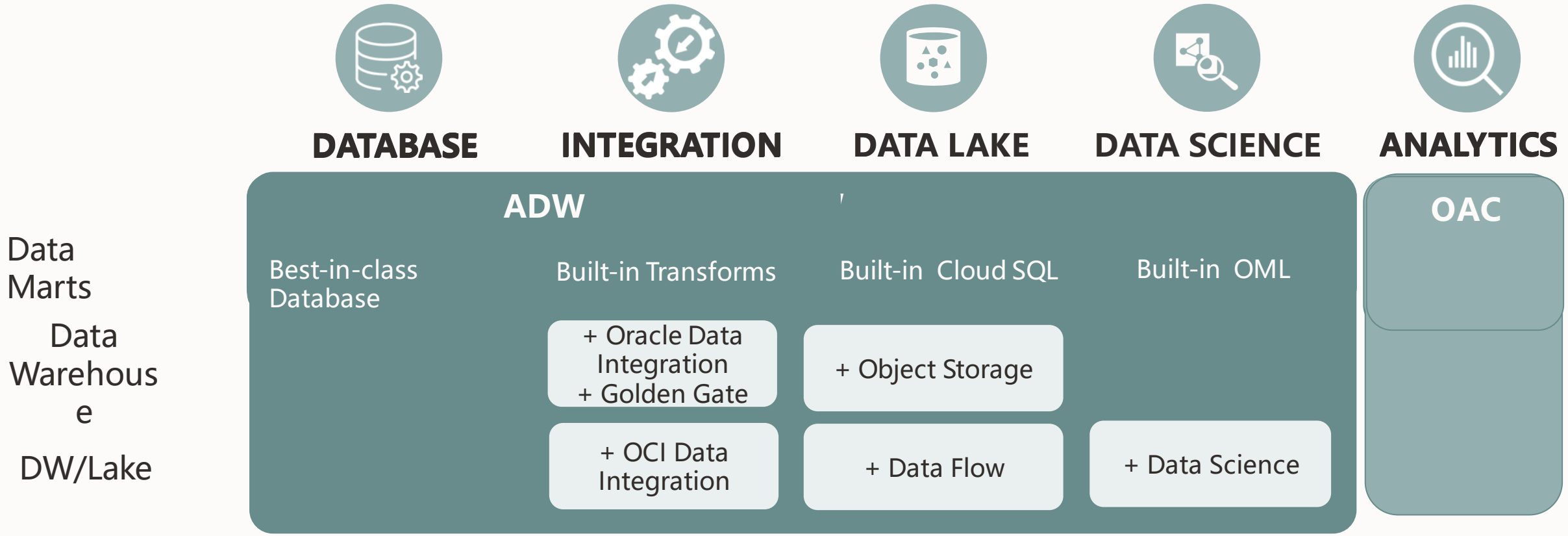
Modern Data Warehouse



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Upcoming Features

Core Infrastructure	Cross-Region Autonomous Data Guard Customer-managed keys
Broader Analytics	Oracle Machine Learning Python support AutoML Property Graph Queries via PGQL Optimized in-memory performance Notebooks with graph visualization
Data Lake Support	Scalable query offload for object storage OCI Data Catalog integration
Enhanced Tooling	Embedded Data Transformation UI Embedded Business Models UI

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