

Product Catalogue – AI/ML Classification Usecase Module

Oracle FLEXCUBE Universal Banking

Accelerator Pack 14.7.2.0.0

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Product Catalogue – AI/ML Classification Usecase Module

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1 Product Catalogue – AI/ML Module

This chapter describes the product of the AI/ML module in the following sections.

1.1 Introduction

This document contains detailed guidelines for executing the Customer Status Usecase in a Machine Learning environment.

1.2 Application Compatibility

Application: **Oracle FLEXCUBE Universal Banking**

Version: **14.7.2.0.0**

1.3 Abbreviation

Abbreviation	Description
FCUBS	Oracle FLEXCUBE Universal Banking
ML	Machine Learning
AI	Artificial Intelligence

2 Pre-installation Checklist

2.1 FLEXCUBE Database Instance

- The Oracle FLEXCUBE Universal Banking database instance should be up and available.
- A separate Oracle FLEXCUBE Universal Banking database is preferred for AI/ML use case execution.
- The Oracle FLEXCUBE Universal Banking database should be allocated with enough memory to process large amounts of data.
- Log in to the Oracle FLEXCUBE Universal Banking database with SYSDBA credentials and execute the below grants to the user.

```
GRANT CREATE MINING MODEL TO <username>;
```

```
GRANT CREATE ANY MINING MODEL TO <username>;
```

```
GRANT ALTER ANY MINING MODEL TO <username>;
```

```
GRANT DROP ANY MINING MODEL TO <username>;
```

```
GRANT SELECT ANY MINING MODEL TO <username>;
```

```
GRANT COMMENT ANY MINING MODEL TO <username>;
```

```
GRANT EXECUTE ON DBMS_DATA_MINING to <username>;
```

3 Installation Steps

To proceed with the installation steps, first check if all the checkpoints mentioned in section [Pre-installation Checklist](#) are met.

3.1 Object Summary

Number	OBJECT TYPE	COUNT
1	MLPKS_AIML_DATA_EXTRACTION.SPC	01
2	MLPKS_AIML_DATA_EXTRACTION.SQL	01
	Total Object Count	02

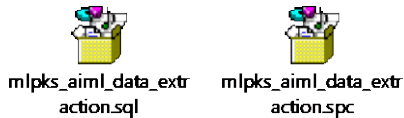
3.2 Installation of Database Objects

3.2.1 Login to the FLEXCUBE Schema

Connect to the FLEXCUBE Database using the required user credentials.

3.2.2 Execute PLSQL Objects

Execute the PLSQL objects that are mentioned in the section [Object Summary](#).



3.2.3 Validate PL/SQL Objects

1. Log in to the FLEXCUBE schema and run the below SQL query.

```
select owner,object_name,object_type,status,created
from all_objects where object_name in
('MLPKS_AIML_DATA_EXTRACTION')
```

2. The SQL query should produce the following result.

OWNER	OBJECT NAME	OBJECT TYPE	STATUS	CREATED
<Schema name>	MLPKS_AIML_DATA_EXTRACTION	PACKAGE	VALID	Creation Date
<Schema name>	MLPKS_AIML_DATA_EXTRACTION	PACKAGE BODY	VALID	Creation Date

4 Execution Steps

4.1 Execute PLSQL Stub

Provide the table name <tablename> in the below stub as input.

Note: Table name should start with Module code <modulecode_tablename> that is provided in the section [Model Definition](#).

A table name with a length less than or equal to 15 is required.

Execute the below stub to populate the Oracle FLEXCUBE customer details data into the above provided temporary table which is used as a data source for Model Training.

```

SET SERVEROUTPUT ON;
DECLARE
  P_BRANCH_CODE VARCHAR2(200);
  P_USER VARCHAR2(200);
  P_FUNCID VARCHAR2(200);
  P_ERR_CODE VARCHAR2(200);
  P_TABLE_NAME VARCHAR2(200);
BEGIN
  P_BRANCH_CODE := NULL;
  P_USER := NULL;
  P_FUNCID := NULL;
  P_ERR_CODE := NULL;
  P_TABLE_NAME :=<tablename>;
  GLOBAL.PR_INIT(<branch>,<fcubs_frontend_user>);

  /*Pass the branch and username in above command. Sample=>
  GLOBAL.PR_INIT('000','ADMINUSER2');*/

  IF NOT MLPKS_AIML_DATA_EXTRACTION.FN_CUSTOMER_DATA_EXTRACTION(
    P_BRANCH_CODE => P_BRANCH_CODE,
    P_USER => P_USER,
    P_FUNCID => P_FUNCID,
    P_TABLE_NAME => P_TABLE_NAME,
    P_ERR_CODE => P_ERR_CODE
  ) THEN
    DBMS_OUTPUT.PUT_LINE('Error in execution');
  ELSE
    DBMS_OUTPUT.PUT_LINE('Completed successfully');
  END IF;

END;
```

4.2 Model Definition

Launch the **STDUCDFN (ML Use Case Definition)** screen in the FLEXCUBE application. Provide below the required details for model definition.

Screen Labels	Values
USE CASE NAME	CUST_STAT
DESCRIPTION	Customer Status
USECASE TYPE	CLASSIFICATION
MODULE CODE	CO
TRAINING DATA SOURCE	<Provide the table that is inputted in the section Execute PLSQL Stub >
UNIQUE CASE ID	CUSTOMER_NO
TARGET COLUMN	CUSTOMER_RECORD_STATUS
POSITIVE TARGET VALUE	<Pick 0 from the dropdown options 1 and 0>
TABLE SPACE	<Empty>
PARTITION COLUMN	<Empty>
SELECTED ALGORITHM	<Empty>
MODEL ERROR STATISTIC	<Empty>

4.3 Model Training and Scoring

4.3.1 Model Training

Launch the **STDTRSCR (ML Training and Scoring)** screen in the FLEXCUBE application. Enter the query and provide below required details and click Execute query.

Screen Labels	Values
USE CASE NAME	CUST_STAT

Click the **Training Model** Button.

Note: Model Training time may extend from several minutes to a few hours based on the volume of the data source.

4.3.2 Batch Scoring

Once Model Training is successfully built, proceed with the batch scoring.

Click the **Batch Scoring** Button. Once Batch scoring is completed, validate the results in the section [Results Validation](#).

4.3.3 Results Validation

Login to the FLEXCUBE database schema with user credentials. Provide the USE CASE name below that is given under the section [Model Definition](#) and execute the below query to validate the results.

```
select * from <use case name>_res_class
```