MIFlow & Feast

Laboratorio 3

Configuración del entorno

Verificación de la instalación

```
1∨import mlflow
                      2 import feast
                             print(mlflow.__version__)
                            print(feast. version )
              ✓ 2.8s
                                                                                                                                                                                                                                                                            Python
           3.5.0
            0.47.0
• (.venv) [diggspapu@diggsy lab-3-mlops]$ feast init california feature store
     Creating a new Feast repository in /home/diggspapu/lab-3-mlops/california_feature_store.
(.venv) [diggspapu@diggsy lab-3-mlops]$ cd california feature store
○ (.venv) [diggspapu@diggsy california feature_store]$
(.venv) [diggspapu@diggsy feature_repo]$ feast apply
|home/diggspapu@diggsy feature_repo]$ feast apply
|home/diggspapu/lab-3-mlops/.venv/lib/python3.10/site-packages/feast/infra/online_stores/sqlite.py:91: UserWarning: Field name "vector_enabled" in "SqliteOnlineStoreConfig"
| class SqliteOnlineStoreConfig(feastConfigBaseWodel, VectorStoreConfig):
|home/diggspapu/lab-3-mlops/.venv/lib/python3.10/site-packages/feast/infra/online_stores/sqlite.py:91: UserWarning: Field name "vector_len" in "SqliteOnlineStoreConfig"
| chadwre ap attribute in pagent "ivestorStoreConfig"
/home/diggspapu/lab-3-mlops/.venv/lib/python3.10/site-packages/feast/infra/online_stores/sqlite.py:91: UserWarning: Field name "vector_len" in "SqliteOnlineStoreConfig" class sqliteOnlineStoreConfig(FeastConfigBaseWodel, VectorStoreConfig): 
/home/diggspapu/lab-3-mlops/california_feature_store/feature_repo/example_repo.py:27: DeprecationWarning: Entity value_type will be mandatory in the next release. Plea se specify a value_type for entity 'driver'. 
driver = Entity(name="driver", join_keys=["driver_id"])
/home/diggspapu/lab-3-mlops/california_feature_store/feature_repo/house_features.py:5: DeprecationWarning: Entity value_type will be mandatory in the next release. Plea se specify a value_type for entity 'house'.
house Entity(
Applying changes for project california feature store
/home/diggspapu/lab-3-mlops/.venv/lib/python3.10/site-packages/feast/feature_store.py:581: RuntimeWarning: On demand feature view is an experimental feature. This API is stable, but the functionality does not scale well for offline retrieval
Created project california_feature_store
Created entity driver
Created entity house
Created feature view driver_hourly_stats
Created feature view driver_hourly_stats_fresh
Created feature view house_features
Created on demand feature view transformed_conv_rate_fresh
Created on demand feature view transformed_conv_rate
Created feature service driver_activity_v3
Created feature service driver_activity_v2
Created feature service driver_activity_v1
10/19/2025 06:27:27 PM root WARNING: Cannot use sqlite vec for vector search 10/19/2025 06:27:27 PM root WARNING: Cannot use sqlite_vec for vector search
10/19/2025 06:27:27 PM root WARNING: Cannot use sqlite_vec for vector search
 Created sqlite table california_feature_store_driver_hourly_stats_fresh
Created sqlite table california feature store driver hourly stats
Created sqlite table california feature store house features
```

```
(.venv) [diggspapu@diggsy feature_repo]$ feast materialize 2025-10-01T00:00:00 2025-10-19T23:59:59

/home/diggspapu@diggsy feature_repo]$ feast materialize 2025-10-01T00:00:00 2025-10-19T23:59:59

/home/diggspapu/lab-3-mlops/.venv/lib/python3.10/site-packages/feast/infra/online_stores/sqlite.py:91: UserWarning: Field name "vector_enabled" in "SqliteOnlineStoreConfig" class SqliteOnlineStoreConfig(FeastConfigBaseModel, VectorStoreConfig):

/home/diggspapu/lab-3-mlops/.venv/lib/python3.10/site-packages/feast/infra/online_stores/sqlite.py:91: UserWarning: Field name "vector_len" in "SqliteOnlineStoreConfig" shadows an attribute in parent "vectorStoreConfig" class SqliteOnlineStoreConfig(FeastConfigBaseModel, VectorStoreConfig):

Materializing 3 feature views from 2023-09-30 17:00:00-07:00 to 2025-10-19 16:59:59-07:00 into the sqlite online store.
 100%
                                                                                                    | 5/5 [00:00<00:00, 626.11it/s]
 100%
                                                                                                    5/5 [00:00<00:00, 810.68it/s]
                                                                                       | 20640/20640 [00:03<00:00, 5597.94it/s]
 100%
    venv) [diggspapu@diggsy feature repo]$
             features = store.get_online_features(
       2
                   features=[
                          "house_features:HouseAge",
                          "house_features:AveRooms",
                          "house_features:AveBedrms",
       6
                          "house_features:Population",
     10
                          "house_features:Longitude
                          "house_features:MedPP",
"house_features:RatioRoomsBed",
     14
     15
                  entity_rows=entity_df.to_dict(orient="records")
     16
             ).to df()
     17
           features.head()
     18
                                                                                                                                                                                                                                        Python
        house id AveRooms HouseAge
                                                             MedPP
                                                                                  HouseP AveOccup AveBedrms MedInc Longitude Latitude RatioRoomsBed Population
   0
                   0
                           6.984127
                                                   41.0 3.257687
                                                                            822.888889
                                                                                                 2.555556
                                                                                                                     1.023810
                                                                                                                                             8
                                                                                                                                                       -122.23
                                                                                                                                                                         37.88
                                                                                                                                                                                              0.146591
                                                                                                                                                                                                                     322.0
                                                                                                                     0.971880
                                                                                                                                             8
                           6.238137
                                                   21.0 3.934608 5065.730228
                                                                                                  2.109842
                                                                                                                                                       -122.22
                                                                                                                                                                         37.86
                                                                                                                                                                                              0.155797
                                                                                                                                                                                                                    2401.0
                                                                                                                                                       -122.24
                                                                                                                     1.073446
                                                                                                                                                                         37.85
   2
                           8.288136
                                                   52.0 2.589838 1389.920904
                                                                                                 2.802260
                                                                                                                                                                                              0.129516
                                                                                                                                                                                                                     496.0
                           5.817352
                                                   52.0 2.214765 1421.753425
                                                                                                  2.547945
                                                                                                                     1.073059
                                                                                                                                                       -122.25
                                                                                                                                                                         37.85
                                                                                                                                                                                              0.184458
                                                                                                                                                                                                                     558.0
                           6.281853
                                                   52.0 1.763125 1232.528958
                                                                                                 2.181467
                                                                                                                     1.081081
                                                                                                                                                       -122.25
                                                                                                                                                                         37.85
                                                                                                                                                                                              0.172096
                                                                                                                                                                                                                     565.0
                      model in ['linear_regression', 'random_forest_regression','gradient_boosting_regressor']:
print(f"___{model}___")
# Cargar modelo desde MLflow
model_uri = f"models:/{model}/None" # Ajusta el nombre si es diferente
           4
                      model = mlflow.sklearn.load model(model uri)
                      # Seleccionar columnas de entrada
                      X = features[[
                             "MedInc", "HouseAge", "AveRooms", "AveBedrms",
"Population", "AveOccup", "Latitude", "Longitude",
"MedPP", "RatioRoomsBed", "HouseP"
         10
         11
         12
         13
         14
                      # Hacer predicciones
                      predictions = model.predict(X)
                      for house_id, pred in zip(features["house_id"], predictions):
    print(f"Predicción para house_id {house_id}: {pred}")
         18
         19
       √ 1.2s
                                                                                                                                                                                                                                       Python
           _linear_regression_
     Predicción para house_id 0: 4.261807704929353
     Predicción para house_id 1: 4.736701228770947
Predicción para house_id 2: 3.785234637398119
     Predicción para house id 3: 3.2075470718407146
     Predicción para house_id 4: 2.655767865840474
```

Predicción para house_id 5: 2.8644450900146055 Predicción para house_id 6: 2.611333644404887