Home Page - Select or create a n | Recommendation System - Jupyt | lightgbm - Jupyter Notebook | linear - Jupyter Notebook

http://localhost:8891/notebooks/Recommendation%20System.ipynb

jupyter Recommendation System Last Checkpoint: 07/08/2023 (unsaved changes)

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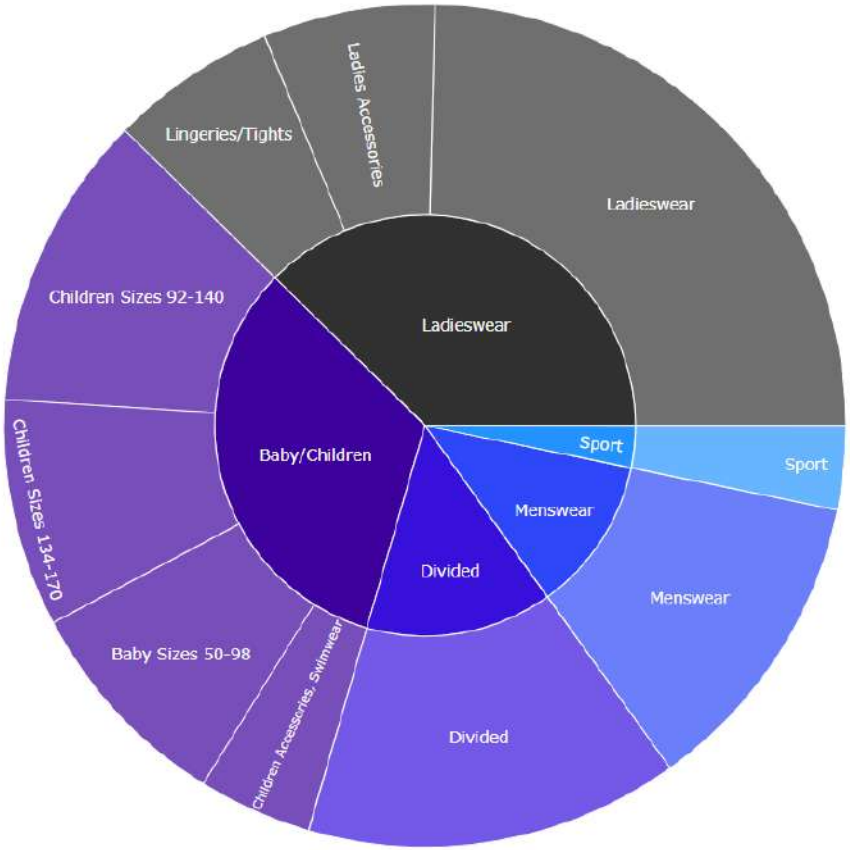
Not Trusted | Python 3 (ipykernel)

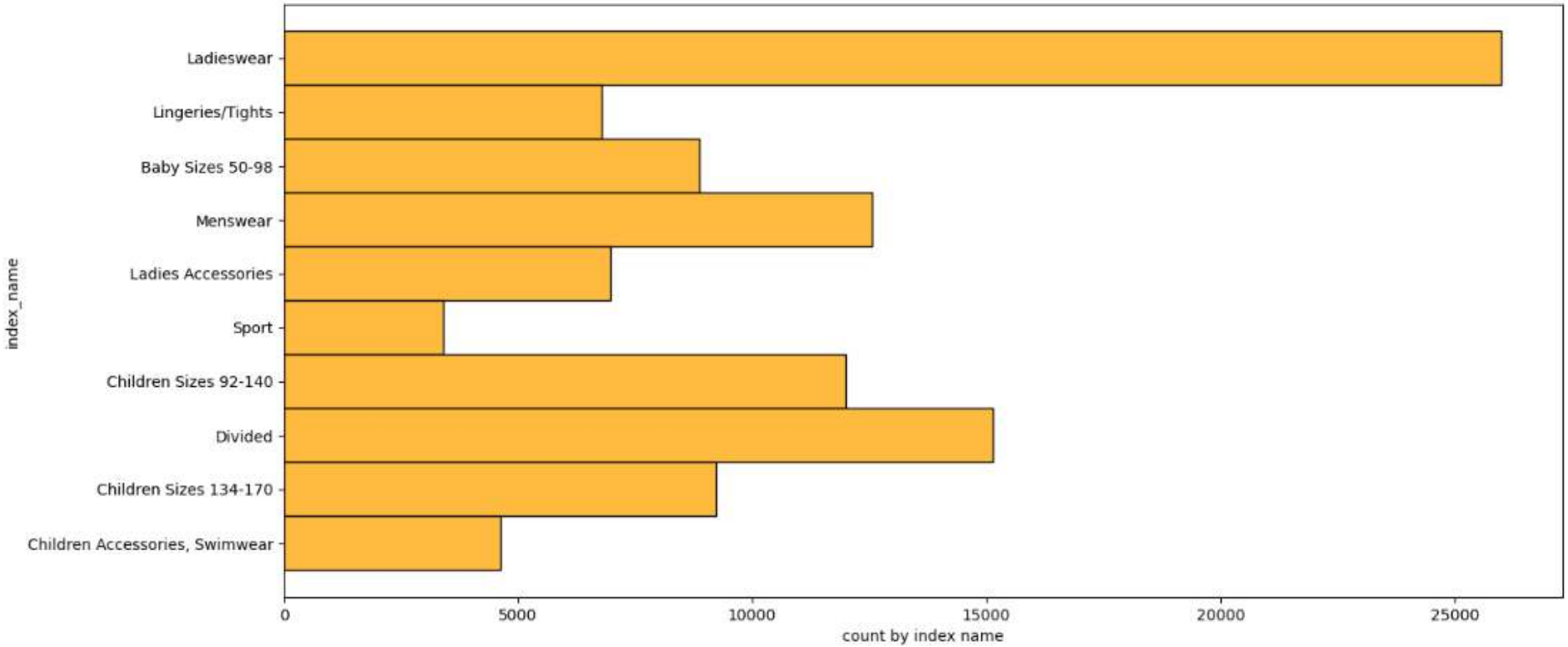
Run Code



Type here to search

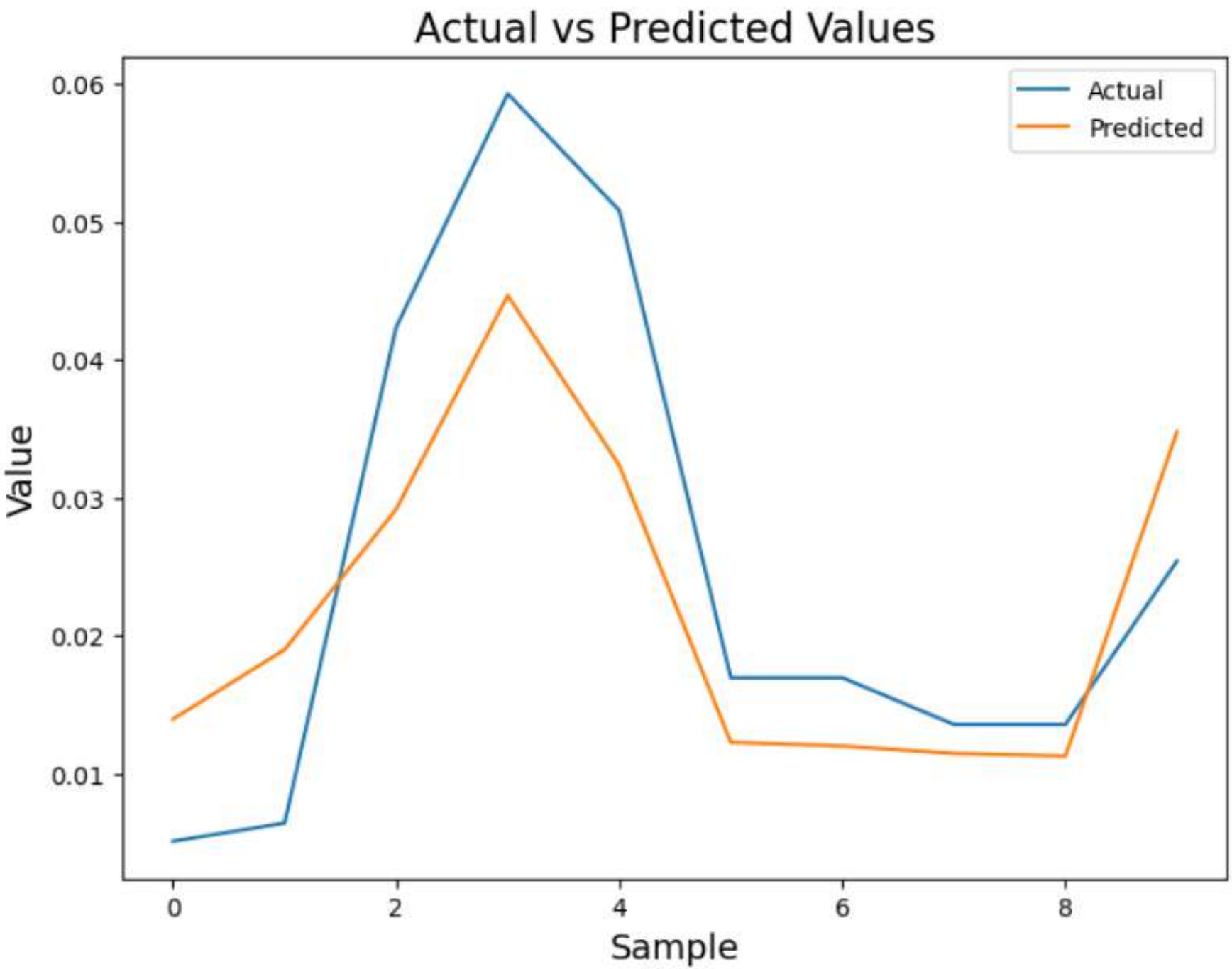
30°C Partly cloudy

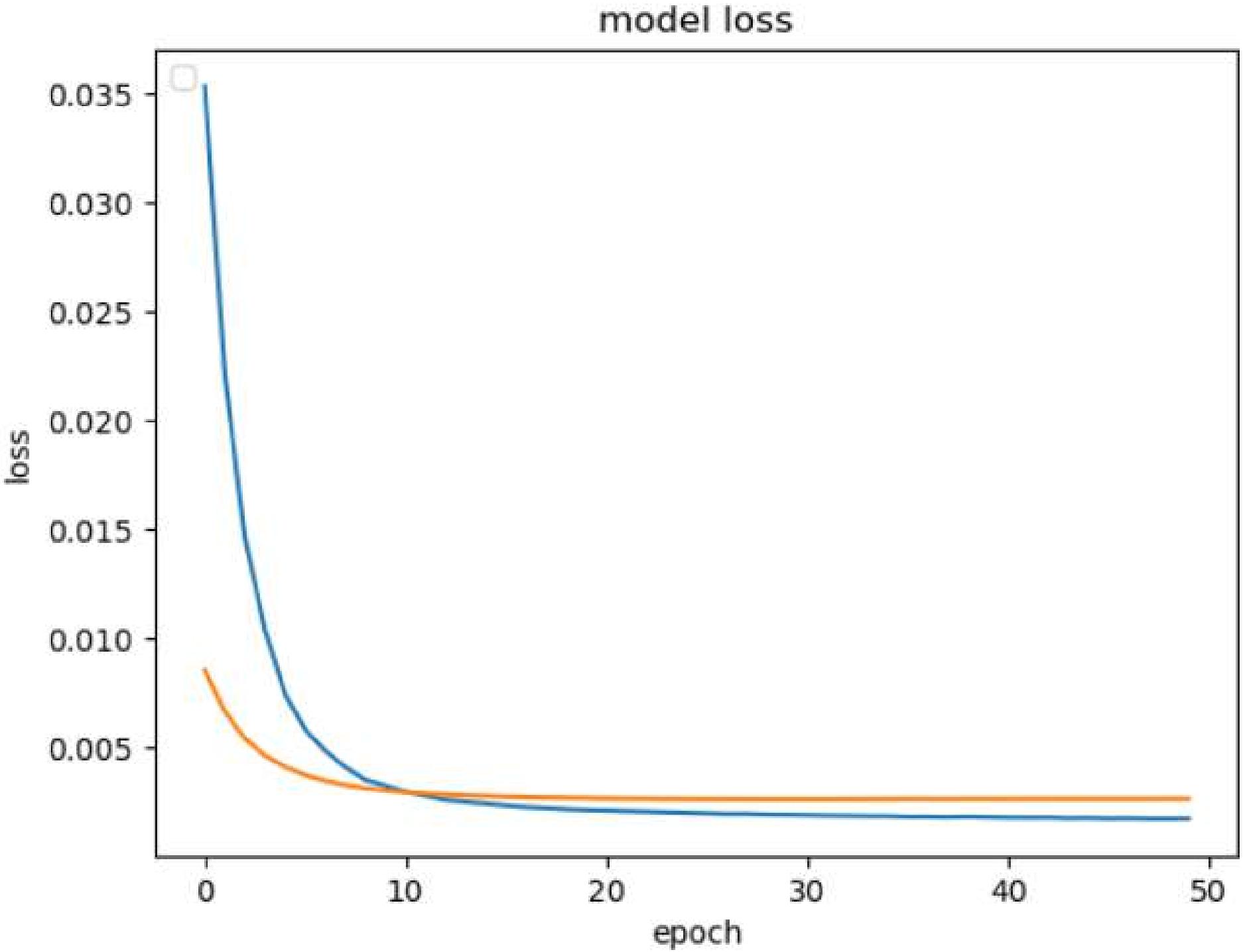
3:50 AM
7/19/2023

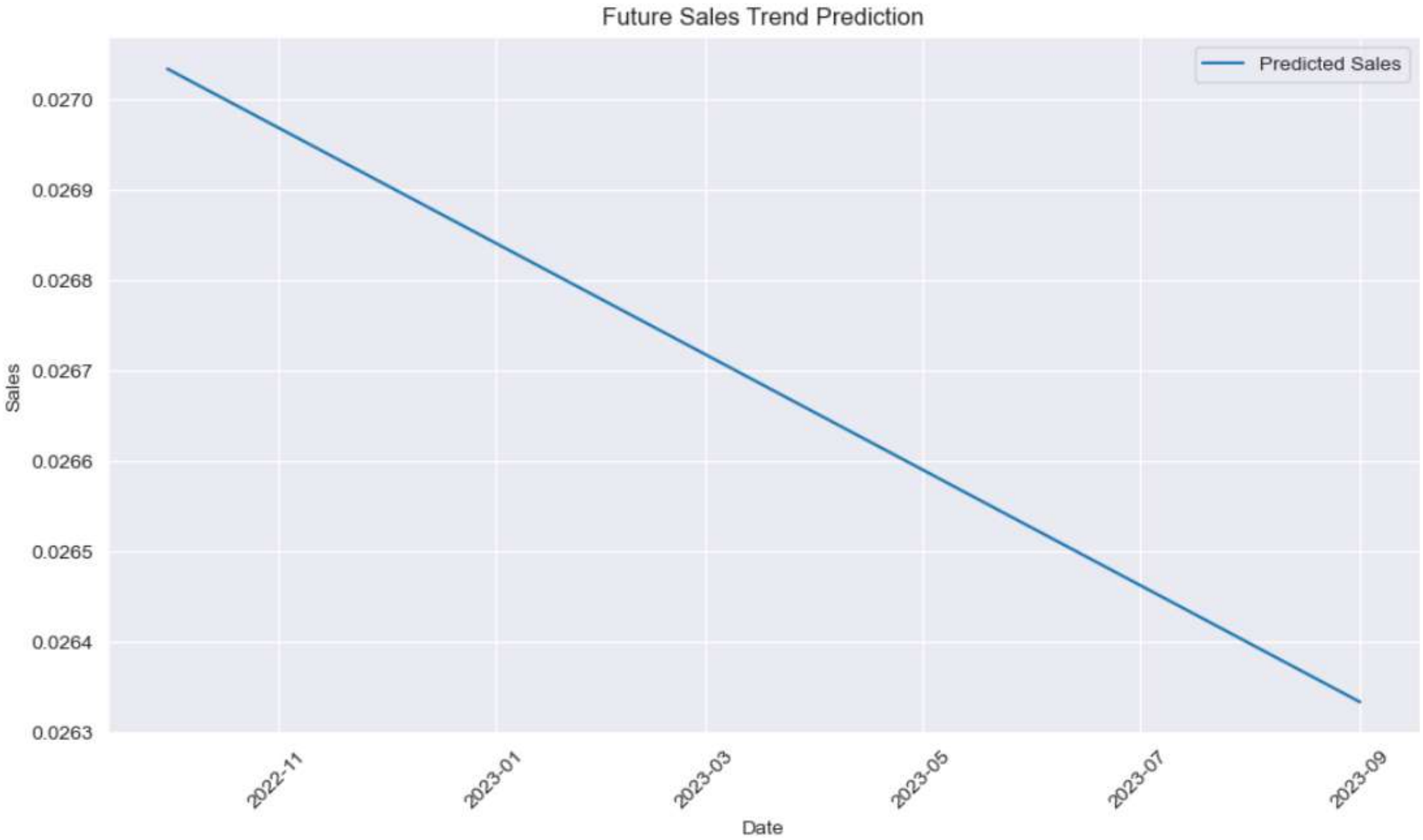

Ladieswear
Lingeries/Tights
Baby Sizes 50-98
Menswear
Ladies Accessories
Sport
Children Sizes 92-140
Divided
Children Sizes 134-170
Children Accessories, Swimwear
index_name
0
5000
10000
15000
20000
25000
count by index name

In [88]:
```
def autoEncoder(X):


    # Input
    input_layer = Input(shape=(X.shape[1],), name='UserScore')

    # Encoder
    # ------------------------------
    enc = Dense(512, activation='selu', name='EncLayer1')(input_layer)

    # Latent Space
    # ------------------------------
    lat_space = Dense(256, activation='selu', name='LatentSpace')(enc)
    lat_space = Dropout(0.8, name='Dropout')(lat_space) # Dropout

    # Decoder
    # ------------------------------
    dec = Dense(512, activation='selu', name='DecLayer1')(lat_space)

    # Output
    output_layer = Dense(X.shape[1], activation='linear', name='UserScorePred')(dec)

    # this model maps an input to its reconstruction
    model = Model(input_layer, output_layer)

    return model
```

In [89]:
```
X = customer_items_matrix_df_train.values
X.shape[1]
model = autoEncoder(X)

model.compile(optimizer = Adam(lr=0.0001), loss='mse')

model.summary()
```


Actual vs Predicted Values
Actual
Predicted
0.06
0.05
0.04
0.03
0.02
0.01
Value
0
2
4
6
8
Sample


model loss
loss
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0
10
20
30
40
50
epoch


Future Sales Trend Prediction
Predicted Sales
0.0270
0.0269
0.0268
0.0267
0.0266
0.0265
0.0264
0.0263
Sales
2022-11
2023-01
2023-03
2023-05
2023-07
2023-09
Date