

TEAM ID: PNT2022TMID36553

PROJECT NAME: DemandEst - AI powered Food Demand Forecaster

The screenshot displays a Jupyter Notebook environment with two visible code cells. The top cell, labeled 'In [133]:', contains Python code for data preprocessing and model prediction. It merges 'test' and 'meal_info' on 'meal_id', then merges the result with 'fulfilment_center_info' on 'center_id'. It drops 'meal_id' and 'center_id' and selects specific columns (2:6 and 6:8) to create 'tcols'. Three LabelEncoders (Ib1, Ib2, Ib3) are used to transform 'center_type', 'category', and 'cuisine' respectively. The features are then used to create 'X_test'. The bottom cell, labeled 'In [134]:', uses 'DT.predict(X_test)' to generate predictions, sets 'pred[pred<0] = 0', and creates a 'submit' DataFrame with 'id' and 'num_orders' columns.

Predicting The Output Using The Model

Here, we are creating X_test which we are using to test the model to predict the number of orders by giving input to the model build.

```
In [133]: testfinal = pd.merge(test, meal_info, on="meal_id", how="outer")
testfinal = pd.merge(testfinal, fulfilment_center_info, on="center_id", how="outer")
testfinal = testfinal.drop(['meal_id', 'center_id'], axis=1)

tcols = testfinal.columns.tolist()
tcols = tcols[:2] + tcols[8:] + tcols[6:8] + tcols[2:6]
testfinal = testfinal[tcols]

Ib1 = LabelEncoder()
testfinal['center_type'] = Ib1.fit_transform(testfinal['center_type'])

Ib2 = LabelEncoder()
testfinal['category'] = Ib2.fit_transform(testfinal['category'])

Ib3 = LabelEncoder()
testfinal['cuisine'] = Ib3.fit_transform(testfinal['cuisine'])

X_test = testfinal[features].values

In [134]: pred = DT.predict(X_test)
pred[pred<0] = 0
submit = pd.DataFrame({
    'id': testfinal['id'],
    'num_orders': pred
})
```

Submit the predicted output values(Number of orders) to "submission.csv"

```
In [135]: submit.to_csv("submission.csv", index=False)
```

```
In [136]: submit.describe()
```

Out[136]:

	id	num_orders
count	3.257300e+04	32573.000000
mean	1.248476e+06	263.114244
std	1.441580e+05	367.092916
min	1.000085e+06	14.666667
25%	1.123969e+06	64.113281
50%	1.247296e+06	147.022222
75%	1.372971e+06	324.133333
max	1.499990e+06	6174.850000