```
1 # from google.colab import files
  2 # uploaded = files.upload()
 1 import pandas as pd
 2 import numpy as np
 1 rev_df = pd.read_csv('Amazon_Reviews.csv', engine='python')
 2 rev_df
₹
             Reviewer
                                                                                                                                                  \overline{\Pi}
                                                                     Review
                                                                                                             Review
                                                                                                                                       Date of
                                            Profile Link Country
                                                                                  Review Date Rating
                                                                                                                     Review Text
                 Name
                                                                      Count
                                                                                                             Title
                                                                                                                                   Experience
                                                                                                                                                  ılı.
                                                                                                             A Store
                                                                                                 Rated
                                                                                                                        I registered
                                                                                                               That
                                                                                                                                                  10
                                                                                      2024-09-
                                                                                                  1 out
                                                                                                                            on the
                                                                                                                                     September
               Eugene
                                                                          1
        0
                         /users/66e8185ff1598352d6b3701a
                                                                US
                                                                                                            Doesn't
                                                                                                                      website, tried
                   ath
                                                                      review
                                                                             16T13:44:26.000Z
                                                                                                   of 5
                                                                                                                                       16, 2024
                                                                                                        Want to Sell
                                                                                                                       to order a ...
                                                                                                  stars
                                                                                                           Anything
                                                                                                                      Had multiple
                                                                                                               Had
                                                                                                 Rated
                                                                                                            multiple
                                                                                                                        orders one
                Daniel
                                                                                     2024-09-
                                                                                                  1 out
                                                                                                                                     September
                         /users/5d75e460200c1f6a6373648c
        1
                                                                GB
                                                                                                          orders one
                                                                                                                         turned up
              ohalloran
                                                                    reviews 16T18:26:46.000Z
                                                                                                   of 5
                                                                                                                                       16, 2024
                                                                                                           turned up
                                                                                                                         and driver
                                                                                                  stars
                                                                                                              and...
                                                                                                                              h...
                                                                                                                        I informed
                                                                                                 Rated
                                                                                                                            these
                                                                                                          I informed
                                                                                      2024-09-
                                                                         90
                                                                                                  1 out
                                                                                                                        reprobates
                                                                                                                                     September
        2
               p fisher
                          /users/546cfcf1000064000197b88f
                                                                GB
                                                                                                              these
                                                                    reviews 16T21:47:39.000Z
                                                                                                   of 5
                                                                                                                             that I
                                                                                                                                       16, 2024
                                                                                                          reprobates
                                                                                                  stars
                                                                                                                     WOULD NOT
                                                                                                                              В...
                                                                                                           Advertise
                                                                                                 Rated
                                                                                                                     I have bought
                                                                                                           one price
                                                                                      2024-09-
                 Greg
                                                                          5
                                                                                                  1 out
                                                                                                                      from Amazon
                                                                                                                                     September
        3
                         /users/62c35cdbacc0ea0012ccaffa
                                                                                                               then
                 Dunn
                                                                    reviews 17T07:15:49.000Z
                                                                                                   of 5
                                                                                                                        before and
                                                                                                                                       17, 2024
                                                                                                          increase it
                                                                                                                       no proble...
                                                                                                  stars
                                                                                                          on website
                                                                                                                      If I could give
                                                                                                 Rated
                                                                                                            If I could
                Sheila
                                                                                      2024-09-
                                                                          8
                                                                                                  1 out
                                                                                                                      a lower rate I
                                                                                                                                     September
                        /users/5ddbe429478d88251550610e
                                                                                                         give a lower
               Hannah
                                                                    reviews 16T18:37:17.000Z
                                                                                                   of 5
                                                                                                                          would! I
                                                                                                                                       16, 2024
                                                                                                         rate I would
                                                                                                  stars
                                                                                                                          cancel...
 Next steps: (
             Generate code with rev_df
                                          View recommended plots
                                                                         New interactive sheet
 1 rev_df.info()
 2 print()
 3 print(f'Null : \n{rev_df.isnull().sum()}')
    <class 'pandas.core.frame.DataFrame'>
    RangeIndex: 21214 entries, 0 to 21213
    Data columns (total 9 columns):
          Column
                                Non-Null Count
     #
                                                 Dtype
     0
          Reviewer Name
                                21214 non-null
                                                 object
      1
          Profile Link
                                21163 non-null
                                                 object
          Country
      2
                                21054 non-null
                                                 object
      3
          Review Count
                                21055 non-null
                                                  object
      4
          Review Date
                                21055 non-null
                                                 object
                                21055 non-null
          Rating
                                                 object
          Review Title
                                21055 non-null
                                                 object
          Review Text
                                21055 non-null
                                                 object
          Date of Experience 20947 non-null
                                                 object
    dtypes: object(9)
    memory usage: 1.5+ MB
    Null:
    Reviewer Name
                               0
    Profile Link
                              51
    Country
                             160
                             159
    Review Count
    Review Date
                             159
    Rating
                             159
    Review Title
                             159
    Review Text
                             159
```

Date of Experience

dtype: int64

267

```
1 # correcting all the column names
 3 rev_df.columns = rev_df.columns.str.lower().str.replace(' ', '_')
 4 rev_df.columns
'date of experience'],
           dtype='object')
 1 # cleaning the profile links and removing duplicates
 2 import uuid
 4 uid = uuid.uuid4().hex[:24]
 5 profile = f'/user/{uid}'
 6 rev_df['profile_link'].fillna(profile,inplace=True)
 7 rev_df.drop_duplicates(inplace=True)
\rightarrow
    <ipython-input-7-e2d94c52b8d0>:6: FutureWarning: A value is trying to be set on a copy of a DataFrame or Series through chained assi
     The behavior will change in pandas 3.0. This inplace method will never work because the intermediate object on which we are setting
    For example, when doing 'df[col].method(value, inplace=True)', try using 'df.method({col: value}, inplace=True)' or df[col] = df[col]
       rev_df['profile_link'].fillna(profile,inplace=True)
 1 # usingmos common country to fill in the country names using mode
 2 most_common_country = rev_df['country'].mode()[0]
 3 rev_df['country'].fillna(most_common_country, inplace=True)
 4 rev df
    <ipython-input-8-e7df5d195954>:3: FutureWarning: A value is trying to be set on a copy of a DataFrame or Series through chained assi
→
    The behavior will change in pandas 3.0. This inplace method will never work because the intermediate object on which we are setting
    For example, when doing 'df[col].method(value, inplace=True)', try using 'df.method({col: value}, inplace=True)' or df[col] = df[col]
       rev_df['country'].fillna(most_common_country, inplace=True)
                                               profile link country review count
                                                                                         review date rating review title review text date
             reviewer name
                                                                                                                 A Store That
                                                                                                        Rated
                                                                                                                               I registered
                                                                                             2024-09-
                                                                                                        1 out
                                                                                                                Doesn't Want
                                                                                                                                   on the
                             /users/66e8185ff1598352d6b3701a
       0
                Eugene ath
                                                                  US
                                                                            1 review
                                                                                                                                            Se
                                                                                                                     to Sell
                                                                                     16T13:44:26.000Z
                                                                                                         of 5
                                                                                                                             website, tried
                                                                                                        stars
                                                                                                                   Anything
                                                                                                                              to order a ...
                                                                                                                              Had multiple
                                                                                                                Had multiple
                                                                                                        Rated
                                                                                                                               orders one
                     Daniel
                                                                                             2024-09-
                                                                                                        1 out
                                                                                                                  orders one
                             /users/5d75e460200c1f6a6373648c
                                                                  GB
                                                                           9 reviews
                                                                                                                                turned up
                                                                                                                                            Se
                  ohalloran
                                                                                     16T18:26:46.000Z
                                                                                                         of 5
                                                                                                                   turned up
                                                                                                                                and driver
                                                                                                                      and...
                                                                                                        stars
                                                                                                                                      h...
                                                                                                                                I informed
                                                                                                        Rated
                                                                                                                                    these
                                                                                                                  Linformed
                                                                                             2024-09-
                                                                                                        1 out
                                                                                                                               reprobates
                              /users/546cfcf1000064000197b88f
                                                                  GB
                                                                                                                                            Se
       2
                    p fisher
                                                                          90 reviews
                                                                                                                      these
                                                                                     16T21:47:39.000Z
                                                                                                         of 5
                                                                                                                                    that I
                                                                                                                  reprobates
                                                                                                                             WOULD NOT
                                                                                                        stars
                                                                                                                                      В...
                                                                                                        Rated
                                                                                                                Advertise one
                                                                                                                             I have bought
                                                                                             2024-09-
                                                                                                        1 out
                                                                                                                  price then
                                                                                                                             from Amazon
       3
                 Greg Dunn
                              /users/62c35cdbacc0ea0012ccaffa
                                                                  ΑU
                                                                           5 reviews
                                                                                                                                            Se
                                                                                     17T07:15:49.000Z
                                                                                                         of 5
                                                                                                                increase it on
                                                                                                                               before and
                                                                                                        stars
                                                                                                                    website
                                                                                                                               no proble...
                                                                                                        Rated
                                                                                                                             If I could give
                                                                                                                If I could give
                                                                                             2024-09-
                                                                                                        1 out
                                                                                                                              a lower rate I
              Sheila Hannah /users/5ddbe429478d88251550610e
                                                                  GB
                                                                                                                a lower rate I
                                                                                                                                            Se
```

8 reviews

16T18:37:17.000Z

2009-03

of 5

stars

Rated

5 out

of 5

would! I

cancel...

I have had

fulfillment,

perfect order

would

Fast!!

```
21209
                 Anders T
                           /users/47bd4ffe0000640001001044
                                                                DΚ
                                                                                   22T13:14:12.000Z
Next steps:
            Generate code with rev_df
                                       View recommended plots
                                                                    New interactive sheet
1 # from the review count column numerocal values are extraxcted
3 rev_df['review_count'] = rev_df['review_count'].str.extract(r'(\d+)')
 4 rev_df['review_count'] = pd.to_numeric(rev_df['review_count'], errors='coerce')
5 mean_val = rev_df['review_count'].mean()
6 rev_df['review_count'].fillna(mean_val, inplace=True)
```

```
7 rev_df['review_count'] = rev_df['review_count'].astype(int)
8 rev df
```

<ipython-input-9-df4aa9abf6db>:6: FutureWarning: A value is trying to be set on a copy of a DataFrame or Series through chained assi
The behavior will change in pandas 3.0. This inplace method will never work because the intermediate object on which we are setting

For example, when doing 'df[col].method(value, inplace=True)', try using 'df.method({col: value}, inplace=True)' or df[col] = df[col]

rev_df['review_count'].fillna(mean_val, inplace=True)

	reviewer_name	profile_link	country	review_count	review_date	rating	review_title	review_text	dat
0	Eugene ath	/users/66e8185ff1598352d6b3701a	US	1	2024-09- 16T13:44:26.000Z	Rated 1 out of 5 stars	A Store That Doesn't Want to Sell Anything	I registered on the website, tried to order a	Se
1	Daniel ohalloran	/users/5d75e460200c1f6a6373648c	GB	9	2024-09- 16T18:26:46.000Z	Rated 1 out of 5 stars	Had multiple orders one turned up and	Had multiple orders one turned up and driver h	Se
2	p fisher	/users/546cfcf1000064000197b88f	GB	90	2024-09- 16T21:47:39.000Z	Rated 1 out of 5 stars	I informed these reprobates	I informed these reprobates that I WOULD NOT B	S€
3	Greg Dunn	/users/62c35cdbacc0ea0012ccaffa	AU	5	2024-09- 17T07:15:49.000Z	Rated 1 out of 5 stars	Advertise one price then increase it on website	I have bought from Amazon before and no proble	S€
4	Sheila Hannah	/users/5ddbe429478d88251550610e	GB	8	2024-09- 16T18:37:17.000Z	Rated 1 out of 5 stars	If I could give a lower rate I would	If I could give a lower rate I would! I cancel	S€
21209	Anders T	/users/47bd4ffe0000640001001044	DK	1	2009-03- 22T13:14:12.000Z	Rated 5 out of 5	Fast!!	I have had perfect order fulfillment,	•

Next steps: Generate code with rev_df View recommended plots New interactive sheet

```
1 # Transforming the review_date column as per datetime
2
3 rev_df['review_date'] = pd.to_datetime(rev_df['review_date'], errors='coerce')
4 # rev_df['review_date'] = rev_df['review_date'].dt.strftime('%Y-%m-%d')
5 most_common_date = rev_df['review_date'].mode()[0]
6 rev_df['review_date'] = rev_df['review_date'].fillna(most_common_date)
7
8 rev_df['date_of_experience'] = pd.to_datetime(rev_df['date_of_experience'])
9 # rev_df['date_of_experience'] = rev_df['date_of_experience'].dt.strftime('%Y-%m-%d')
10 most_common_date = rev_df['date_of_experience'].mode()[0]
11 rev_df['date_of_experience'] = rev_df['date_of_experience'].fillna(most_common_date)
12
13 rev_df
```

4

5 rev_df

Next steps: (Generate code with rev_df

	reviewer_name	profile_link	country	review_count	review_date	rating	review_title	review_text	date_d
0	Eugene ath	/users/66e8185ff1598352d6b3701a	US	1	2024-09-16 13:44:26+00:00	Rated 1 out of 5 stars	A Store That Doesn't Want to Sell Anything	I registered on the website, tried to order a	
1	Daniel ohalloran	/users/5d75e460200c1f6a6373648c	GB	9	2024-09-16 18:26:46+00:00	Rated 1 out of 5 stars	Had multiple orders one turned up and	Had multiple orders one turned up and driver h	
2	p fisher	/users/546cfcf1000064000197b88f	GB	90	2024-09-16 21:47:39+00:00	Rated 1 out of 5 stars	I informed these reprobates	I informed these reprobates that I WOULD NOT B	
3	Greg Dunn	/users/62c35cdbacc0ea0012ccaffa	AU	5	2024-09-17 07:15:49+00:00	Rated 1 out of 5 stars	Advertise one price then increase it on website	I have bought from Amazon before and no proble	
4	Sheila Hannah	/users/5ddbe429478d88251550610e	GB	8	2024-09-16 18:37:17+00:00	Rated 1 out of 5 stars	If I could give a lower rate I would	If I could give a lower rate I would! I cancel	
•••						 Rated		 I have had	

2009-03-22

New interactive sheet

5 out

_ ... perfect order

1 # Extracting the numerical value from string
2
3 rev_df['rating'] = rev_df['rating'].str.extract(r'Rated (\d+) out of 5 stars')
4 rev_df['rating'] = pd.to_numeric(rev_df['rating'], errors='coerce')
5 mean_value = rev_df['rating'].mean()
6 rev_df['rating'] = rev_df['rating'].fillna(mean_value).round().astype(int)

1 rev_df['review_title'] = rev_df['review_title'].fillna('N/A')
2 rev_df['review_text'] = rev_df['review_text'].fillna('N/A')
3
4 rev_df['text_features'] = rev_df['review_text'] + ' ' + rev_df['review_title']

1 from textblob import TextBlob
2
3 rev_df['polarity'] = rev_df['review_text'].apply(lambda x: TextBlob(x).sentiment.polarity)
4 rev_df['sentiment'] = rev_df['polarity'].apply(lambda x: 'positive' if x > 0 else ('negative' if x < 0 else 'neutral'))</pre>

View recommended plots

	_	_
-	→	4

•	reviewer_name	profile_link	country	review_count	review_date	rating	review_title	review_text	dat
0	Eugene ath	/users/66e8185ff1598352d6b3701a	US	1	2024-09-16 13:44:26+00:00	1	A Store That Doesn't Want to Sell Anything	I registered on the website, tried to order a	
1	Daniel ohalloran	/users/5d75e460200c1f6a6373648c	GB	9	2024-09-16 18:26:46+00:00	1	Had multiple orders one turned up and	Had multiple orders one turned up and driver h	
2	p fisher	/users/546cfcf1000064000197b88f	GB	90	2024-09-16 21:47:39+00:00	1	I informed these reprobates	I informed these reprobates that I WOULD NOT B	
3	Greg Dunn	/users/62c35cdbacc0ea0012ccaffa	AU	5	2024-09-17 07:15:49+00:00	1	Advertise one price then increase it on website	I have bought from Amazon before and no proble	
4	Sheila Hannah	/users/5ddbe429478d88251550610e	GB	8	2024-09-16 18:37:17+00:00	1	If I could give a lower rate I would	If I could give a lower rate I would! I cancel	
21209	Anders T	/users/47bd4ffe0000640001001044	DK	1	2009-03-22 13:14:12+00:00	5	Fast!!	I have had perfect order fulfillment, and fast	
21210	David E	/users/495bbbc0000064000100a972	US	2	2008-12-31 18:57:31+00:00	5	Consistently Excellent	I have had perfect order fulfillment, and fast	
21211	Joseph Harding	/users/48cfacbf0000640001005d04	GB	3	2008-09-16 13:05:05+00:00	3	Good prices but delivery can take time :	I always find myself going back to amazon beco	
21212	Mads Dørup	/users/474aaec70000640001000a44	DK	82	2008-04-28 11:09:05+00:00	5	World-class online shopping	I have placed an abundance of orders with Amaz	
21213	Kim Fuglsang Kramer	/users/46d1ed150000640001000051	DK	2	2007-08-27 17:25:01+00:00	4	No title	those goods i've ordered by Amazon.com, have b	

21212 rows × 12 columns 4

Next steps: Generate code with rev_df

View recommended plots

New interactive sheet

¹ rev_df['has_negative_title'] = rev_df['review_title'].str.contains("w ointed", case=False, na=False)
2 rev_df['has_positive_title'] = rev_df['review_title'].str.contains("great|excellent|amazing|perfect|love", case=False, na=False)

³ rev_df

┈	_		
->	•		

r	eviewer_name	profile_link	country	review_count	review_date	rating	review_title	review_text
0	Eugene ath	/users/66e8185ff1598352d6b3701a	US	1	2024-09-16 13:44:26+00:00	1	A Store That Doesn't Want to Sell Anything	I registered on the website, tried to order a
1	Daniel ohalloran	/users/5d75e460200c1f6a6373648c	GB	9	2024-09-16 18:26:46+00:00	1	Had multiple orders one turned up and	Had multiple orders one turned up and driver h
2	p fisher	/users/546cfcf1000064000197b88f	GB	90	2024-09-16 21:47:39+00:00	1	I informed these reprobates	I informed these reprobates that I WOULD NOT B
3	Greg Dunn	/users/62c35cdbacc0ea0012ccaffa	AU	5	2024-09-17 07:15:49+00:00	1	Advertise one price then increase it on website	I have bought from Amazon before and no proble
4	Sheila Hannah	/users/5ddbe429478d88251550610e	GB	8	2024-09-16 18:37:17+00:00	1	If I could give a lower rate I would	If I could give a lower rate I would! I cancel
21209	Anders T	/users/47bd4ffe0000640001001044	DK	1	2009-03-22 13:14:12+00:00	5	Fast!!	I have had perfect order fulfillment, and fast
21210	David E	/users/495bbbc0000064000100a972	US	2	2008-12-31 18:57:31+00:00	5	Consistently Excellent	I have had perfect order fulfillment, and fast
21211 J	loseph Harding	/users/48cfacbf0000640001005d04	GB	3	2008-09-16 13:05:05+00:00	3	Good prices but delivery can take time :	I always find myself going back to amazon beco
21212	Mads Dørup	/users/474aaec70000640001000a44	DK	82	2008-04-28 11:09:05+00:00	5	World-class online shopping	I have placed an abundance of orders with Amaz
21213	Kim Fuglsang Kramer	/users/46d1ed150000640001000051	DK	2	2007-08-27 17:25:01+00:00	4	No title	those goods i've ordered by Amazon.com, have b
	s × 14 columns							
	s × 14 columns Generate code w	vith rev df	d plots	New interactive	sheet			

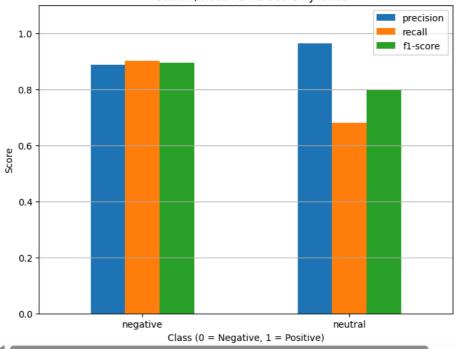
1 # from google.colab import files
2 # rev_df.to_csv('cleaned_ecomm_data.csv', index=False)
3 # files.download('cleaned_ecomm_data.csv')

Machine Learning

```
1 # Importing required libraries for prediction using machine learning
2
3 from sklearn.linear_model import LogisticRegression
4 from sklearn.feature_extraction.text import TfidfVectorizer
5 from sklearn.model_selection import train_test_split
6 from sklearn.metrics import classification_report, accuracy_score
7 import matplotlib.pyplot as plt
8
9 tf = TfidfVectorizer()
10 x = tf.fit_transform(rev_df['text_features'])
11 y = rev_df['sentiment']
12
13 x_train, x_test, y_train, y_test = train_test_split(x, y, test_size=0.2, random_state=42)
```

```
15 model = LogisticRegression()
16 model.fit(x, y)
17 y_pred = model.predict(x_test)
19 print(classification_report(y_test, y_pred))
20 report = classification_report(y_test, y_pred, output_dict=True)
21 metrics_df = pd.DataFrame(report).transpose().iloc[:2][['precision', 'recall', 'f1-score']]
22 metrics_df.plot(kind='bar', figsize=(8, 6))
23 plt.title('Precision, Recall & F1-Score by Class')
24 plt.xlabel('Class (0 = Negative, 1 = Positive)')
25 plt.ylabel('Score')
26 plt.ylim(0, 1.1)
27 plt.grid(True, axis='y')
28 plt.xticks(rotation=0)
29 plt.show()
₹
                   precision
                                recall f1-score
                                                   support
        negative
                        0.89
                                  0.90
                                            0.89
                                                      1692
                        0.96
                                  0.68
                                            0.80
         neutral
                                  0.94
                                            0.91
                                                      2086
        positive
                        0.89
                                            0.89
                                                      4243
        accuracy
                        0.91
                                  0.84
                                                      4243
                                            0.87
       macro avg
                        0.90
                                  0.89
                                            0.89
                                                      4243
    weighted avg
```

Precision, Recall & F1-Score by Class



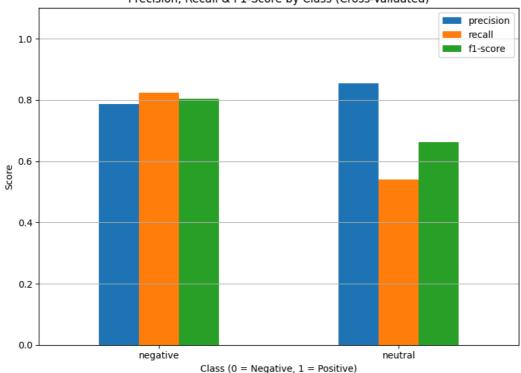
Cross-Validation

```
Generated code may be subject to a license | NAIST-SE/SOImages | mrkntrci/Forest_Fire_Susceptibility_ML
 1 from sklearn.model_selection import cross_val_score, StratifiedKFold, cross_val_predict
 2 from sklearn.metrics import classification_report, accuracy_score
 4 tf = TfidfVectorizer()
 5 x = tf.fit_transform(rev_df['text_features'])
 6 y = rev_df['sentiment']
 8 model = LogisticRegression()
10 skf = StratifiedKFold(n_splits=5, shuffle=True, random_state=42)
11 cv_scores = cross_val_score(model, x, y, cv=skf, scoring='accuracy')
12
13 print(f'Cross-Validation Scores : {cv_scores[0]}')
15 y_pred_cv = cross_val_predict(model, x, y, cv=skf)
16 print(f'Classification Report : {classification_report(y, y_pred_cv)}')
17 print(f'Accuracy Score : {accuracy_score(y, y_pred_cv):.2f}')
18
19 report = classification_report(y, y_pred_cv, output_dict=True)
20 metrics_df = pd.DataFrame(report).transpose().iloc[:2][['precision', 'recall', 'f1-score']]
22 # Plot metrics
```

```
23 metrics_df.plot(kind='bar', figsize=(8, 6))
 24 plt.title('Precision, Recall & F1-Score by Class (Cross-Validated)')
 25 plt.xlabel('Class (0 = Negative, 1 = Positive)')
 26 plt.ylabel('Score')
 27 plt.ylim(0, 1.1)
 28 plt.grid(True, axis='y')
 29 plt.xticks(rotation=0)
 30 plt.tight_layout()
 31 plt.show()
 32
→ Cross-Validation Scores : 0.8197030403016733
    Mean Accuracy : 0.81
    {\tt Classification}\ {\tt Report}\ :
                                           precision
                                                      recall f1-score support
        negative
                        0.79
                                  0.82
                                            0.80
                                                       8340
         neutral
                        0.85
                                  0.54
                                            0.66
                                                       2251
                                  0.86
         positive
                        0.83
                                            0.85
        accuracy
                                            0.81
                                                      21212
                                  0.74
                        0.82
                                                      21212
                                            0.77
       macro avg
    weighted avg
                        0.81
                                  0.81
                                            0.81
                                                      21212
```

Accuracy Score : 0.81

Precision, Recall & F1-Score by Class (Cross-Validated)



V NLP

```
1 from textblob import TextBlob
 2 import nltk
 3 nltk.download('punkt_tab')
 5 aspects = ['price', 'delivery', 'quality']
 6 def aspect_sentiment(text):
      blob = TextBlob(text)
 8
       aspect_sentiments = {}
 9
       for aspect in aspects:
10
        for sentence in blob.sentences:
11
           if aspect in sentence.lower():
12
            aspect_sentiments[aspect] = sentence.sentiment.polarity
13
       return aspect_sentiments
15 rev_df['Aspect_Sentiment'] = rev_df['text_features'].apply(aspect_sentiment)
16 print(rev_df[['text_features','Aspect_Sentiment']].head())
\rightarrow [nltk_data] Downloading package punkt_tab to /root/nltk_data...
    [nltk_data] Unzipping tokenizers/punkt_tab.zip.
                                         0 I registered on the website, tried to order a ...
    1 Had multiple orders one turned up and driver h... {'delivery': 0.0}
```