ReviewAnalysis

January 1, 2020

[2]:
```
import pandas as pd
import psycopg2
import sqlalchemy
import matplotlib as plt
import io

%matplotlib inline
```

[1]:
```
from sqlalchemy import create_engine

POSTGRES_ADDRESS = 'localhost' ## INSERT YOUR DB ADDRESS IF IT'S NOT ON PANOPLY
POSTGRES_PORT = '5430'
POSTGRES_USERNAME = 'de' ## CHANGE THIS TO YOUR PANOPLY/POSTGRES USERNAME
POSTGRES_PASSWORD = 'takeitaway' ## CHANGE THIS TO YOUR PANOPLY/POSTGRES␣
 ↪PASSWORD
POSTGRES_DBNAME = 'de' ## CHANGE THIS TO YOUR DATABASE NAME
# A long string that contains the necessary Postgres login information
postgres_str = ('postgresql://{username}:{password}@{ipaddress}:{port}/
 ↪{dbname}'.
 ↪format(username=POSTGRES_USERNAME,password=POSTGRES_PASSWORD,ipaddress=POSTGRES_ADDRESS,por
# Create the connection
cnx = create_engine(postgres_str)
```

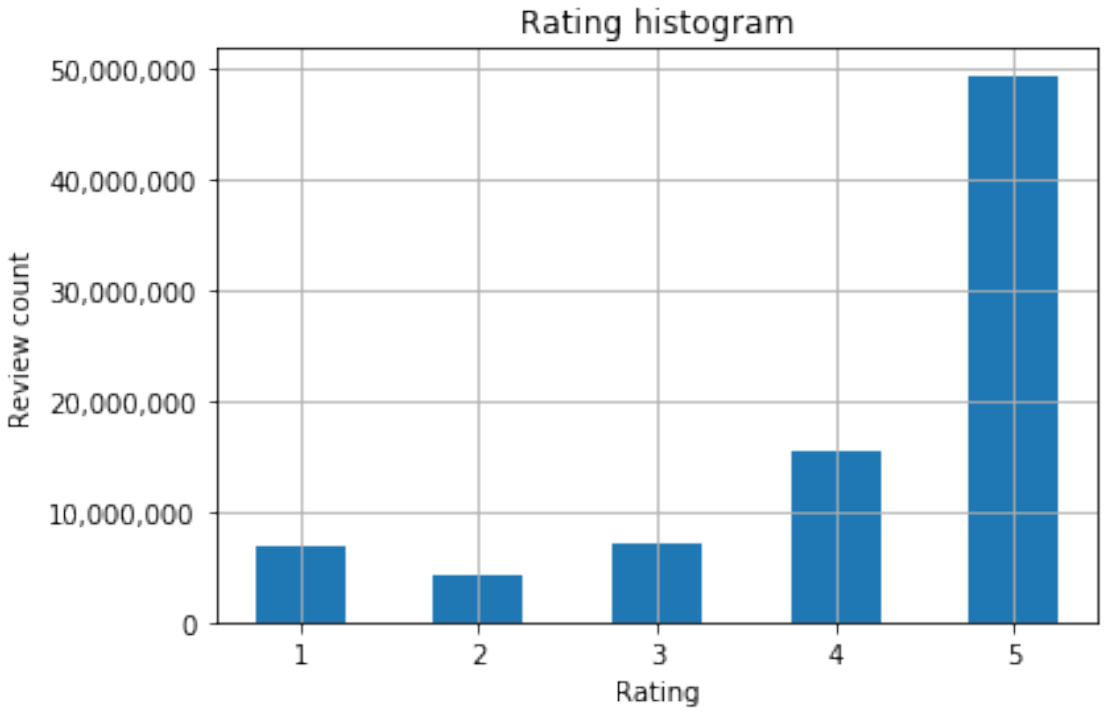
[3]:
```
def read_sql_inmem_uncompressed(query, conn):
    copy_sql = "COPY ({query}) TO STDOUT WITH CSV {head}".format(
       query=query, head="HEADER"
    )
    cur = conn.raw_connection().cursor()
    store = io.StringIO()
    cur.copy_expert(copy_sql, store)
    store.seek(0)
    df = pd.read_csv(store)
    return df
```

[4]:
```
query = '''SELECT asin, rating from dbt_reviews.reviews_staging'''
ratings = read_sql_inmem_uncompressed(query, cnx)
ratings.head()
```

[4]:

	asin	rating
0	0000000078	5.0
1	0000000116	4.0
2	0000000116	1.0
3	0000000868	4.0
4	0000013714	4.0

[5]:
```
arr = ratings.rating.hist(bins=5, rwidth=0.5, range=[0.5,5.5], align='mid')
plt.pyplot.xlabel('Rating')
plt.pyplot.ylabel('Review count')
plt.pyplot.title('Rating histogram')
arr.get_yaxis().set_major_formatter(
    plt.ticker.FuncFormatter(lambda x, p: format(int(x), ',')))
plt.pyplot.show()
```



[3]:
```
query = '''select count(*) from dbt_reviews.metadata_alsobought ab
join dbt_reviews.metadata_alsoviewed av
on av.asin = ab.asin
where av.also_viewed = ab.also_bought'''
with cnx.connect() as con:
    count = con.execute(query).scalar()
print("There are {} related products that are both 'also viewed' and 'also␣
 ↪bought'".format(count))
```

```
There are 22933949 related products that are both 'also viewed' and 'also
bought'
```