jupytar-notebook

April 24, 2024

```
[1]: import pandas as pd
     import datetime as dt
     import numpy as np
     import warnings
     warnings.filterwarnings('ignore')
[2]: df = pd.read_csv('books.csv')
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                                         best_book_id
                                                                   books_count
                                                         work_id
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                                       J.K. Rowling, Mary GrandPré
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                                                    Stephenie Meyer
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                                                         John Green
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                                                      Veronica Roth
                        9.781582e+12
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                                                       Mary Hoffman
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                                                  Caragh M. O'Brien
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                                       Abigail Haas, Abby McDonald
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                                             Maria Dahvana Headley
     1353
            802734375
                        9.780803e+12
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           original_publication_year
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                                                                  The Hunger Games
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           https://images.gr-assets.com/books/1420836321s...
     [1354 rows x 23 columns]
    df.tail()
[3]:
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                                                 Caragh M. O'Brien
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ratings_3 ratings_4 ratings_5 \
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1352 https://images.gr-assets.com/books/1413479866s...
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[5 rows x 23 columns]
```

[4]: df.info()

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 1354 entries, 0 to 1353
Data columns (total 23 columns):

#	Column	Non-Null Count	Dtype
0	book_id	1354 non-null	int64
1	goodreads_book_id	1354 non-null	int64
2	best_book_id	1354 non-null	int64
3	work_id	1354 non-null	int64
4	books_count	1354 non-null	int64
5	isbn	1302 non-null	object
6	isbn13	1310 non-null	float64
7	authors	1354 non-null	object
8	original_publication_year	1351 non-null	float64
9	original_title	1302 non-null	object
10	title	1354 non-null	object
11	language_code	1245 non-null	object
12	average_rating	1354 non-null	float64
13	ratings_count	1354 non-null	int64
14	work_ratings_count	1354 non-null	int64
15	work_text_reviews_count	1354 non-null	int64

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1354 non-null
                                                      int64
     17
         ratings_2
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         ratings_3
                                     1354 non-null
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     19
         ratings_4
                                     1354 non-null
                                                      int64
         ratings 5
                                     1354 non-null
     20
                                                      int64
     21
         image url
                                     1354 non-null
                                                      object
         small image url
                                     1354 non-null
                                                      object
    dtypes: float64(3), int64(13), object(7)
    memory usage: 243.4+ KB
[5]: df['original_publication_year'] = pd.

datetime(df['original_publication_year'])

     print(df['original_publication_year'])
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    1
           1970-01-01 00:00:00.000001997
    2
           1970-01-01 00:00:00.000002005
    3
           1970-01-01 00:00:00.000002012
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           1970-01-01 00:00:00.000002002
           1970-01-01 00:00:00.000002012
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           1970-01-01 00:00:00.000002013
    1352
           1970-01-01 00:00:00.000002015
    1353
           1970-01-01 00:00:00.000002013
    Name: original_publication_year, Length: 1354, dtype: datetime64[ns]
[6]: df = df[(df.books_count>=0)&(df.ratings_count>=0)&(df.
      work_ratings_count>=0) & (df.work_text_reviews_count>=0) & (df.ratings_1>=0) & (df.
      \negratings_2>=0) &(df.ratings_3>=0) &(df.ratings_4>=0) &(df.ratings_5>=0)]
     print(df)
          book_id goodreads_book_id best_book_id
                                                       work_id books_count \
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                                            2767052
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                                                  Suzanne Collins
    1
           439554934 9.780440e+12 J.K. Rowling, Mary GrandPré
```

1354 non-null

int64

16 ratings_1

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       316015849 9.780316e+12
                                               Stephenie Meyer
3
                                                    John Green
       525478817
                   9.780525e+12
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                                                 Veronica Roth
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                   9.781582e+12
                                                  Mary Hoffman
                                             Caragh M. O'Brien
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                   9.781442e+12
                                  Abigail Haas, Abby McDonald
                                        Maria Dahvana Headley
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                                                         The Fault in Our Stars
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      ... ratings_count work_ratings_count
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[7]: df = df.drop_duplicates()
     print(df)
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                                        best_book_id
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                                                                 books_count
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          https://images.gr-assets.com/books/1474154022m...
    2
          https://images.gr-assets.com/books/1361039443m...
    3
          https://images.gr-assets.com/books/1360206420m...
    4
          https://images.gr-assets.com/books/1328559506m...
          https://images.gr-assets.com/books/1294870497m...
    1349
    1350
          https://images.gr-assets.com/books/1330546217m...
          https://images.gr-assets.com/books/1356513050m...
    1351
    1352 https://images.gr-assets.com/books/1413479866m...
    1353
          https://images.gr-assets.com/books/1420836321m...
                                              small_image_url
    0
          https://images.gr-assets.com/books/1447303603s...
    1
          https://images.gr-assets.com/books/1474154022s...
    2
          https://images.gr-assets.com/books/1361039443s...
    3
          https://images.gr-assets.com/books/1360206420s...
    4
          https://images.gr-assets.com/books/1328559506s...
          https://images.gr-assets.com/books/1294870497s...
    1349
    1350 https://images.gr-assets.com/books/1330546217s...
    1351
          https://images.gr-assets.com/books/1356513050s...
    1352 https://images.gr-assets.com/books/1413479866s...
          https://images.gr-assets.com/books/1420836321s...
    1353
    [1354 rows x 23 columns]
[8]: df.isnull().sum()
                                     0
[8]: book_id
     goodreads_book_id
                                     0
     best_book_id
                                     0
                                     0
     work_id
                                     0
     books_count
     isbn
                                    52
     isbn13
                                    44
                                     0
     authors
     original_publication_year
                                     3
     original title
                                    52
     title
                                     0
     language_code
                                   109
     average_rating
                                     0
                                     0
     ratings_count
     work_ratings_count
                                     0
                                     0
     work_text_reviews_count
```

image_url \

```
ratings_2
                                      0
                                      0
      ratings_3
      ratings_4
                                      0
      ratings_5
                                      0
                                      0
      image_url
      small_image_url
                                      0
      dtype: int64
 [9]: df.dropna(inplace=True)
[10]: df.isnull().sum()
[10]: book_id
                                    0
      goodreads_book_id
                                    0
      best_book_id
                                    0
                                    0
      work_id
      books_count
                                    0
      isbn
                                    0
                                    0
      isbn13
      authors
                                    0
      original_publication_year
                                    0
      original_title
                                    0
      title
                                    0
                                    0
      language_code
                                    0
      average_rating
      ratings_count
                                    0
      work_ratings_count
                                    0
      work_text_reviews_count
                                    0
                                    0
      ratings_1
      ratings_2
                                    0
                                    0
      ratings_3
                                    0
      ratings_4
                                    0
      ratings_5
                                    0
      image_url
      small_image_url
                                    0
      dtype: int64
[11]: HarryPotter = df[df['original_title'].str.contains('Harry Potter', case=False)]
      print (HarryPotter)
            book_id goodreads_book_id best_book_id
                                                         work_id books_count \
                  2
                                      3
                                                         4640799
                                                                           491
     1
                                                     3
     6
                 18
                                      5
                                                     5
                                                                           376
                                                         2402163
                                      2
                                                     2
     8
                 21
                                                                           307
                                                         2809203
     9
                 23
                                  15881
                                                 15881
                                                         6231171
                                                                           398
     10
                 24
                                      6
                                                         3046572
                                                                           332
```

ratings_1

```
11
           25
                           136251
                                          136251
                                                   2963218
                                                                     263
12
                                                                     275
           27
                                1
                                               1
                                                  41335427
96
          422
                           862041
                                          862041
                                                   2962492
                                                                      76
613
         3753
                                                  21457570
                                                                       6
                               10
                                              10
                                                                      42
1036
         7018
                           483445
                                          483445
                                                    471792
            isbn
                         isbn13
                                                                   authors
1
       439554934
                  9.780440e+12
                                              J.K. Rowling, Mary GrandPré
6
      043965548X
                  9.780440e+12
                                 J.K. Rowling, Mary GrandPré, Rufus Beck
                                              J.K. Rowling, Mary GrandPré
8
       439358078
                  9.780439e+12
9
                                              J.K. Rowling, Mary GrandPré
       439064864
                  9.780439e+12
                  9.780439e+12
                                              J.K. Rowling, Mary GrandPré
10
       439139600
                                              J.K. Rowling, Mary GrandPré
       545010225
                  9.780545e+12
11
                                              J.K. Rowling, Mary GrandPré
12
       439785960
                  9.780440e+12
96
       545044251
                  9.780545e+12
                                                              J.K. Rowling
613
       439827604
                  9.780440e+12
                                                              J.K. Rowling
1036 042519891X
                 9.780425e+12
                                                             David Colbert
         original_publication_year
     1970-01-01 00:00:00.000001997
1
     1970-01-01 00:00:00.000001999
6
8
     1970-01-01 00:00:00.000002003
9
     1970-01-01 00:00:00.000001998
     1970-01-01 00:00:00.000002000
10
11
     1970-01-01 00:00:00.000002007
     1970-01-01 00:00:00.000002005
12
     1970-01-01 00:00:00.000001998
96
     1970-01-01 00:00:00.000002005
613
1036 1970-01-01 00:00:00.000002001
                                           original_title
                                                           ... ratings_count
               Harry Potter and the Philosopher's Stone
1
                                                                    4602479
6
               Harry Potter and the Prisoner of Azkaban
                                                                    1832823
8
              Harry Potter and the Order of the Phoenix
                                                                    1735368
9
                Harry Potter and the Chamber of Secrets
                                                                    1779331
10
                     Harry Potter and the Goblet of Fire
                                                                    1753043
                    Harry Potter and the Deathly Hallows
11
                                                                    1746574
                 Harry Potter and the Half-Blood Prince
                                                                    1678823
96
                         Complete Harry Potter Boxed Set
                                                                     190050
           Harry Potter Collection (Harry Potter, #1-6)
613
                                                                      24618
      The Magical Worlds of Harry Potter: A Treasury... ...
                                                                    13820
1036
                          work_text_reviews_count
     work_ratings_count
                                                    ratings_1
                                                                ratings_2
                                                         75504
                                                                   101676
1
                4800065
                                             75867
6
                1969375
                                             36099
                                                          6716
                                                                    20413
8
                1840548
                                             28685
                                                          9528
                                                                    31577
9
                1906199
                                             34172
                                                          8253
                                                                    42251
10
                1868642
                                             31084
                                                          6676
                                                                    20210
```

```
11
                      1847395
                                                   51942
                                                                9363
                                                                          22245
     12
                      1785676
                                                   27520
                                                                          21516
                                                                7308
     96
                       204125
                                                    6508
                                                                1105
                                                                            1285
     613
                        26274
                                                     882
                                                                 203
                                                                             186
     1036
                        15145
                                                     267
                                                                 329
                                                                            1125
            ratings_3 ratings_4
                                   ratings 5 \
     1
               455024
                          1156318
                                     3011543
     6
               166129
                           509447
                                     1266670
     8
               180210
                           494427
                                     1124806
     9
               242345
                           548266
                                     1065084
     10
                          494926
                                     1195045
               151785
     11
               113646
                          383914
                                     1318227
     12
               136333
                           459028
                                     1161491
     96
                 7020
                            30666
                                      164049
     613
                  946
                             3891
                                       21048
     1036
                 3766
                             3593
                                        6332
                                                      image_url \
     1
            https://images.gr-assets.com/books/1474154022m...
            https://images.gr-assets.com/books/1499277281m...
     6
     8
            https://images.gr-assets.com/books/1387141547m...
     9
            https://images.gr-assets.com/books/1474169725m...
     10
            https://images.gr-assets.com/books/1361482611m...
     11
            https://images.gr-assets.com/books/1474171184m...
     12
            https://images.gr-assets.com/books/1361039191m...
     96
            https://images.gr-assets.com/books/1392579059m...
            https://images.gr-assets.com/books/1328867351m...
     613
     1036
           https://s.gr-assets.com/assets/nophoto/book/11...
                                                small_image_url
     1
            https://images.gr-assets.com/books/1474154022s...
     6
            https://images.gr-assets.com/books/1499277281s...
     8
            https://images.gr-assets.com/books/1387141547s...
     9
            https://images.gr-assets.com/books/1474169725s...
            https://images.gr-assets.com/books/1361482611s...
     10
            https://images.gr-assets.com/books/1474171184s...
     11
     12
            https://images.gr-assets.com/books/1361039191s...
     96
            https://images.gr-assets.com/books/1392579059s...
            https://images.gr-assets.com/books/1328867351s...
     613
     1036
           https://s.gr-assets.com/assets/nophoto/book/50...
     [10 rows x 23 columns]
[14]: MostSellingBooks = HarryPotter.loc[HarryPotter['best_book_id'].idxmax()]
      print (MostSellingBooks)
```

book_id 422

```
862041
     goodreads_book_id
     best_book_id
                                                                               862041
                                                                              2962492
     work_id
     books_count
                                                                                   76
     isbn
                                                                            545044251
     isbn13
                                                                      9780545044260.0
     authors
                                                                         J.K. Rowling
                                                        1970-01-01 00:00:00.000001998
     original_publication_year
     original_title
                                                     Complete Harry Potter Boxed Set
     title
                                            Harry Potter Boxset (Harry Potter, #1-7)
     language_code
                                                                                  eng
     average_rating
                                                                                 4.74
                                                                               190050
     ratings_count
                                                                               204125
     work_ratings_count
     work_text_reviews_count
                                                                                 6508
     ratings_1
                                                                                 1105
     ratings_2
                                                                                 1285
                                                                                 7020
     ratings_3
     ratings_4
                                                                                30666
     ratings_5
                                                                               164049
                                   https://images.gr-assets.com/books/1392579059m...
     image_url
     small_image_url
                                   https://images.gr-assets.com/books/1392579059s...
     Name: 96, dtype: object
[15]: AverageRating = HarryPotter['average_rating'].mean()
      print (AverageRating)
     4.4910000000000005
 []:
```