

▼ BIBLIOTECAS

```
import pandas as pd
import matplotlib.pyplot as plt
import numpy as np
import seaborn as sns
```

▼ BASE DE DADOS

```
mc = pd.read_csv('./sample_data/BigmacPrice.csv')
harry_movie = pd.read_csv('./sample_data/Movies.csv')

harry_d = pd.read_csv('./sample_data/Data_Dictionary.csv')
```

▼ TABELAS MCDONALDS

```
display(mc)
```

| | date | currency_code | name | local_price | dollar_ex | dollar_p |
|------|------------|---------------|----------------------|-------------|-----------|----------|
| 0 | 2000-04-01 | ARS | Argentina | 2.50 | 1 | |
| 1 | 2000-04-01 | AUD | Australia | 2.59 | 1 | |
| 2 | 2000-04-01 | BRL | Brazil | 2.95 | 1 | |
| 3 | 2000-04-01 | GBP | Britain | 1.90 | 1 | |
| 4 | 2000-04-01 | CAD | Canada | 2.85 | 1 | |
| ... | ... | ... | ... | ... | ... | |
| 1941 | 2022-07-01 | AED | United Arab Emirates | 18.00 | 3 | |
| 1942 | 2022-07-01 | USD | United States | 5.15 | 1 | |
| 1943 | 2022-07-01 | UYU | Uruguay | 255.00 | 41 | |
| 1944 | 2022-07-01 | VES | Venezuela | 10.00 | 5 | |
| 1945 | 2022-07-01 | VND | Vietnam | 69000.00 | 23417 | |

1946 rows × 6 columns

```
display(mc.head())
```

| | date | currency_code | name | local_price | dollar_ex | dollar_price |
|---|------------|---------------|-----------|-------------|-----------|--------------|
| 0 | 2000-04-01 | ARS | Argentina | 2.50 | 1 | 2.50 |
| 1 | 2000-04-01 | AUD | Australia | 2.59 | 1 | 2.59 |
| 2 | 2000-04-01 | BRL | Brazil | 2.95 | 1 | 2.95 |
| 3 | 2000-04-01 | GBP | Britain | 1.90 | 1 | 1.90 |
| 4 | 2000-04-01 | CAD | Canada | 2.35 | 1 | 2.35 |



```
display(mc.describe())
```

| | local_price | dollar_ex | dollar_price |
|--------------|--------------|--------------|--------------|
| count | 1.946000e+03 | 1.946000e+03 | 1946.000000 |
| mean | 1.581609e+04 | 4.722255e+03 | 3.568011 |
| std | 3.940050e+05 | 1.006232e+05 | 1.417054 |
| min | 0.000000e+00 | 1.000000e+00 | 0.000000 |
| 25% | 4.450000e+00 | 1.000000e+00 | 2.572500 |
| 50% | 1.500000e+01 | 5.000000e+00 | 3.400000 |
| 75% | 8.700000e+01 | 3.200000e+01 | 4.240000 |
| max | 1.602000e+07 | 3.613989e+06 | 11.250000 |



```
display(mc.shape)
```

```
(1946, 6)
```

▼ TABELAS HARRY POTTER FILMES

```
display(harry_movie)
```

Movie

Release

display(harry_movie.head())

| | Movie ID | Movie Title | Release Year | Runtime | Budget | Box Office |
|---|----------|--|--------------|---------|---------------|-----------------|
| 0 | 1 | Harry Potter and the Philosopher's Stone | 2001 | 152 | \$125,000,000 | \$1,002,000,000 |
| 1 | 2 | Harry Potter and the Chamber of Secrets | 2002 | 161 | \$100,000,000 | \$880,300,000 |
| 2 | 3 | Harry Potter and the Prisoner of Azkaban | 2004 | 142 | \$130,000,000 | \$796,700,000 |

display(harry_movie.describe())

| | Movie ID | Release Year | Runtime |
|-------|----------|--------------|------------|
| count | 8.000000 | 8.000000 | 8.000000 |
| mean | 4.500000 | 2006.125000 | 147.375000 |
| std | 2.44949 | 3.720119 | 10.363914 |
| min | 1.000000 | 2001.000000 | 130.000000 |
| 25% | 2.750000 | 2003.500000 | 141.000000 |
| 50% | 4.500000 | 2006.000000 | 149.000000 |
| 75% | 6.250000 | 2009.250000 | 154.000000 |
| max | 8.000000 | 2011.000000 | 161.000000 |

display(harry_movie.shape)

(8, 6)

▼ TABELA HARRY POTTER DICIONÁRIO

display(harry_d)

| | Table | Field | Description |
|----|------------|----------------|--|
| 0 | Movies | Movie ID | Unique identifier for each movie |
| 1 | NaN | Movie Title | Full movie name |
| 2 | NaN | Release Year | Year the movie was released in theaters |
| 3 | NaN | Runtime | Length of the movie in minutes |
| 4 | NaN | Budget | Budget for the movie is US Dollars |
| 5 | NaN | Box Office | Box office revenue for the movie in US Dollars |
| 6 | Chapters | Chapter ID | Unique identifier for each chapter |
| 7 | NaN | Chapter Name | Name of the chapter in the movie script |
| 8 | NaN | Movie ID | Foreign key to match with Movies table |
| 9 | NaN | Movie Chapter | Chapter number within each movie script |
| 10 | Characters | Character ID | Unique identifier for each character |
| 11 | NaN | Character Name | Name of the character |
| 12 | NaN | Species | Species of the character |
| 13 | NaN | Gender | Gender of the character |
| 14 | NaN | House | Hogwarts house (or name of other magical school) |
| 15 | NaN | Patronus | Patronus of the character |
| 16 | NaN | Wand (Wood) | Type of wood for the character's wand |
| 17 | NaN | Wand (Core) | Core for the character's wand |
| 18 | Places | Place ID | Unique identifier for each place |
| 19 | NaN | Place Name | Name of the place |
| 20 | NaN | Place Category | Type of place |
| 21 | Spells | Spell ID | Unique identifier for each spell |
| 22 | NaN | Incantation | Words needed to conjure the spell |
| 23 | NaN | Spell Name | Name of the spell |
| 24 | NaN | Effect | What the spell does |



```
display(harry_d.describe())
```

| | Table | Field | Description |
|--------|--------|----------|----------------------------------|
| count | 6 | 31 | 31 |
| unique | 6 | 27 | 31 |
| top | Movies | Movie ID | Unique identifier for each movie |
| freq | 1 | 2 | 1 |



```
display(harry_d.head())
```

| | Table | Field | Description |
|---|--------|--------------|---|
| 0 | Movies | Movie ID | Unique identifier for each movie |
| 1 | NaN | Movie Title | Full movie name |
| 2 | NaN | Release Year | Year the movie was released in theaters |
| 3 | NaN | Runtime | Length of the movie in minutes |
| 4 | NaN | Budget | Budget for the movie is US Dollars |



```
display(harry_d.shape)
```

```
(31, 3)
```

▼ ANÁLISE DE DADOS

```
filtro = mc['name']
display(filtro)
```

```

0          Argentina
1          Australia
2           Brazil
3          Britain
4           Canada
...
1941  United Arab Emirates
1942          United States
1943           Uruguay
1944          Venezuela
1945           Vietnam
Name: name, Length: 1946, dtype: object
```

```
display(mc.loc[mc['name']=='Brazil'])
```

| | date | currency_code | name | local_price | dollar_ex | dollar_price |
|------|------------|---------------|--------|-------------|-----------|--------------|
| 2 | 2000-04-01 | BRL | Brazil | 2.95 | 1 | 2.95 |
| 30 | 2001-04-01 | BRL | Brazil | 3.60 | 2 | 1.80 |
| 58 | 2002-04-01 | BRL | Brazil | 3.60 | 2 | 1.80 |
| 91 | 2003-04-01 | BRL | Brazil | 4.55 | 3 | 1.52 |
| 123 | 2004-05-01 | BRL | Brazil | 5.40 | 3 | 1.80 |
| 163 | 2005-06-01 | BRL | Brazil | 5.90 | 2 | 2.95 |
| 204 | 2006-01-01 | BRL | Brazil | 6.20 | 2 | 3.10 |
| 236 | 2006-05-01 | BRL | Brazil | 6.40 | 2 | 3.20 |
| 277 | 2007-01-01 | BRL | Brazil | 6.40 | 2 | 3.20 |
| 318 | 2007-06-01 | BRL | Brazil | 6.90 | 1 | 6.90 |
| 359 | 2008-06-01 | BRL | Brazil | 7.50 | 1 | 7.50 |
| 399 | 2009-07-01 | BRL | Brazil | 8.03 | 1 | 8.03 |
| 440 | 2010-01-01 | BRL | Brazil | 8.20 | 1 | 8.20 |
| 481 | 2010-07-01 | BRL | Brazil | 8.71 | 1 | 8.71 |
| 524 | 2011-07-01 | BRL | Brazil | 9.50 | 1 | 9.50 |
| 579 | 2012-01-01 | BRL | Brazil | 10.25 | 1 | 10.25 |
| 634 | 2012-07-01 | BRL | Brazil | 10.08 | 2 | 5.04 |
| 687 | 2013-01-01 | BRL | Brazil | 11.25 | 1 | 11.25 |
| 742 | 2013-07-01 | BRL | Brazil | 12.00 | 2 | 6.00 |
| 797 | 2014-01-01 | BRL | Brazil | 12.40 | 2 | 6.20 |
| 853 | 2014-07-01 | BRL | Brazil | 13.00 | 2 | 6.50 |
| 910 | 2015-01-01 | BRL | Brazil | 13.50 | 2 | 6.75 |
| 966 | 2015-07-01 | BRL | Brazil | 13.50 | 3 | 4.50 |
| 1022 | 2016-01-01 | BRL | Brazil | 13.50 | 4 | 3.38 |
| 1078 | 2016-07-01 | BRL | Brazil | 15.50 | 3 | 5.17 |
| 1134 | 2017-01-01 | BRL | Brazil | 16.50 | 3 | 5.50 |
| 1190 | 2017-07-01 | BRL | Brazil | 16.50 | 3 | 5.50 |
| 1246 | 2018-01-01 | BRL | Brazil | 16.50 | 3 | 5.50 |
| 1304 | 2018-07-01 | BRL | Brazil | 16.90 | 3 | 5.63 |
| 1376 | 2019-01-01 | BRL | Brazil | 16.90 | 3 | 5.63 |
| 1448 | 2019-07-09 | BRL | Brazil | 17.50 | 3 | 5.83 |



```
mc_brazil = (mc.loc[mc['name']=='Brazil'])
```

```
mc_brazil = mc_brazil['dollar_price'].mean()
display(mc_brazil)
```

5.325945945945946

```
harry_movie['Nova'] = harry_movie['Budget'].str[1:4]
harry_movie.info()
```

```
harry_movie['Nova'] = harry_movie['Nova'].astype('int64')
display(harry_movie)
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 8 entries, 0 to 7
Data columns (total 7 columns):
#   Column          Non-Null Count  Dtype
---  -
0   Movie ID        8 non-null     int64
1   Movie Title     8 non-null     object
2   Release Year    8 non-null     int64
3   Runtime         8 non-null     int64
4   Budget          8 non-null     object
5   Box Office      8 non-null     object
6   Nova            8 non-null     object
dtypes: int64(3), object(4)
memory usage: 576.0+ bytes
```

| | Movie ID | Movie Title | Release Year | Runtime | Budget | Box Office |
|---|----------|---|--------------|---------|---------------|-----------------|
| 0 | 1 | Harry Potter and the Philosopher's Stone | 2001 | 152 | \$125,000,000 | \$1,002,000,000 |
| 1 | 2 | Harry Potter and the Chamber of Secrets | 2002 | 161 | \$100,000,000 | \$880,300,000 |
| 2 | 3 | Harry Potter and the Prisoner of Azkaban | 2004 | 142 | \$130,000,000 | \$796,700,000 |
| 3 | 4 | Harry Potter and the Goblet of Fire | 2005 | 157 | \$150,000,000 | \$896,400,000 |
| 4 | 5 | Harry Potter and the Order of the Phoenix | 2007 | 138 | \$150,000,000 | \$942,000,000 |
| 5 | 6 | Harry Potter and the Half-Blood Prince | 2009 | 151 | \$150,000,000 | \$935,000,000 |
| 6 | 7 | Harry Potter and the Deathly Hallows - Part 1 | 2010 | 146 | \$150,000,000 | \$974,000,000 |
| 7 | 8 | Harry Potter and the Deathly Hallows - Part 2 | 2011 | 130 | \$150,000,000 | \$1,024,000,000 |

```
harry_movie['Custo'] = harry_movie['Nova']*1000000
harry_movie.loc[:, "média de BIG MAC Brazil"] = 5.33
```

```
harry_movie.info()
display(harry_movie)
```

```

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 8 entries, 0 to 7
Data columns (total 10 columns):
#   Column                                Non-Null Count  Dtype
---  -
0   Movie ID                             8 non-null      int64
1   Movie Title                           8 non-null      object
2   Release Year                          8 non-null      int64
3   Runtime                              8 non-null      int64
4   Budget                               8 non-null      object
5   Box Office                           8 non-null      object
6   Nova                                 8 non-null      int64
7   Custo                                8 non-null      int64
8   média BIG MAC Brazil                 8 non-null      int64
9   média de BIG MAC Brazil              8 non-null      float64
dtypes: float64(1), int64(6), object(3)
memory usage: 768.0+ bytes

```

| | Movie ID | Movie Title | Release Year | Runtime | Budget | Box Office | Nova | Custo |
|---|----------|--|--------------|---------|---------------|-----------------|------|-----------|
| 0 | 1 | Harry Potter and the Philosopher's Stone | 2001 | 152 | \$125,000,000 | \$1,002,000,000 | 125 | 125000000 |

```

harry_movie['Qtde de BIG MAC por filme'] = harry_movie['Custo']/harry_movie['média de BIG
display(harry_movie)

```

| | Movie ID | Movie Title | Release Year | Runtime | Budget | Box Office | Nova | Custo |
|---|----------|--|--------------|---------|---------------|-----------------|------|-----------|
| 0 | 1 | Harry Potter and the Philosopher's Stone | 2001 | 152 | \$125,000,000 | \$1,002,000,000 | 125 | 125000000 |
| 1 | 2 | Harry Potter and the Chamber of Secrets | 2002 | 161 | \$100,000,000 | \$880,300,000 | 100 | 100000000 |
| 2 | 3 | Harry Potter and the Prisoner of Azkaban | 2004 | 142 | \$130,000,000 | \$796,700,000 | 130 | 130000000 |
| 3 | 4 | Harry Potter and the Goblet of Fire | 2005 | 157 | \$150,000,000 | \$896,400,000 | 150 | 150000000 |
| 4 | 5 | Harry Potter and the Order of the | 2007 | 138 | \$150,000,000 | \$942,000,000 | 150 | 150000000 |


```
mc_azk = harry_movie.loc[2, 'Custo']
display(mc_azk)
```

130000000

```
qt = mc_azk/mc_brazil
print(f"Quantidade de de Big Macs que podemos comprar no Brasil com o custo de produção de
```

Quantidade de de Big Macs que podemos comprar no Brasil com o custo de produção do f



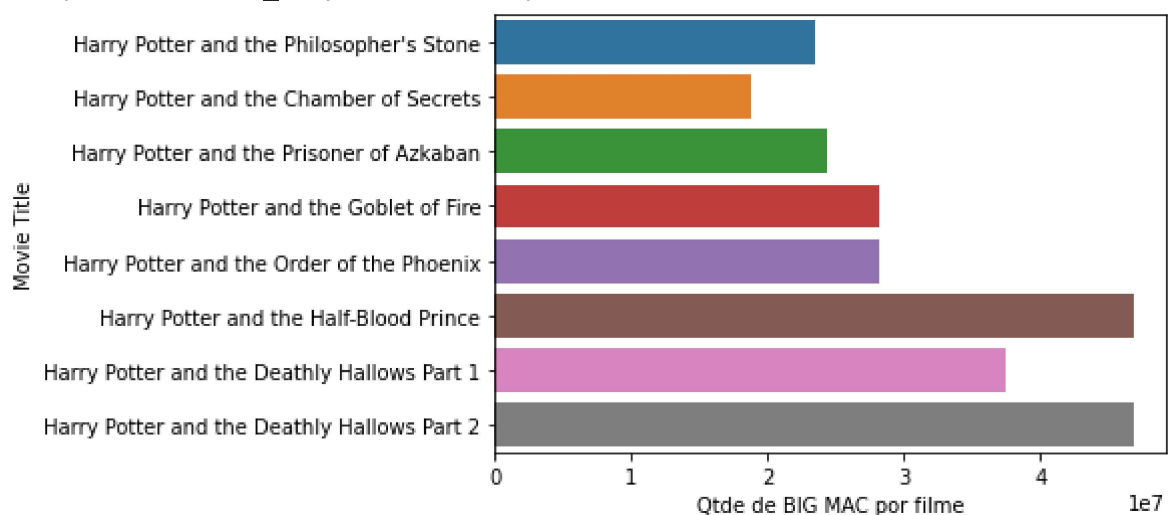
```
plt.plot(harry_movie['Qtde de BIG MAC por filme'])
```

```
plt.ylabel('Movie Title')
```

```
plt.xlabel('Qtde de BIG MAC por filme')
```

```
sns.barplot(x = "Qtde de BIG MAC por filme", y = "Movie Title", data = harry_movie )
```

<matplotlib.axes._subplots.AxesSubplot at 0x7fa43d1dd690>



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