Assignment 6

March 7, 2021

0.0.1 Portfolio assignment 6

60 min: Perform a univariate analysis on at least 2 columns with categorical data and on at least 2 columns with numerical data in the dataset that you chose in portfolio assignment 4. Commit the Notebook to your portfolio when you're finished.

```python
[1]: import pandas as pd
     import seaborn as sns
```

```python
[2]: steam = pd.read_csv(r"steam_games.csv")
     steam.head()
```

```
[2]:                                                url types  \
     0      https://store.steampowered.com/app/379720/DOOM/    app
     1  https://store.steampowered.com/app/578080/PLAY…    app
     2  https://store.steampowered.com/app/637090/BATT…    app
     3      https://store.steampowered.com/app/221100/DayZ/    app
     4  https://store.steampowered.com/app/8500/EVE_On…    app


                                 name  \
     0                          DOOM
     1  PLAYERUNKNOWN'S BATTLEGROUNDS
     2                    BATTLETECH
     3                          DayZ
     4                    EVE Online


                                        desc_snippet  \
     0  Now includes all three premium DLC packs (Unto…
     1  PLAYERUNKNOWN'S BATTLEGROUNDS is a battle roya…
     2  Take command of your own mercenary outfit of '…
     3  The post-soviet country of Chernarus is struck…
     4  EVE Online is a community-driven spaceship MMO…


                                      recent_reviews  \
     0  Very Positive,(554),- 89% of the 554 user revi…
     1  Mixed,(6,214),- 49% of the 6,214 user reviews …
     2  Mixed,(166),- 54% of the 166 user reviews in t…
     3  Mixed,(932),- 57% of the 932 user reviews in t…
```

```
4  Mixed,(287),- 54% of the 287 user reviews in t…


                                         all_reviews  release_date  \
0  Very Positive,(42,550),- 92% of the 42,550 use…  May 12, 2016
1  Mixed,(836,608),- 49% of the 836,608 user revi…  Dec 21, 2017
2  Mostly Positive,(7,030),- 71% of the 7,030 use…  Apr 24, 2018
3  Mixed,(167,115),- 61% of the 167,115 user revi…  Dec 13, 2018
4  Mostly Positive,(11,481),- 74% of the 11,481 u…   May 6, 2003

            developer                             publisher  \
0         id Software    Bethesda Softworks,Bethesda Softworks
1     PUBG Corporation          PUBG Corporation,PUBG Corporation
2  Harebrained Schemes  Paradox Interactive,Paradox Interactive
3  Bohemia Interactive  Bohemia Interactive,Bohemia Interactive
4                 CCP                               CCP,CCP

                                popular_tags  \
0  FPS,Gore,Action,Demons,Shooter,First-Person,Gr…
1  Survival,Shooter,Multiplayer,Battle Royale,PvP…
2  Mechs,Strategy,Turn-Based,Turn-Based Tactics,S…
3  Survival,Zombies,Open World,Multiplayer,PvP,Ma…
4  Space,Massively Multiplayer,Sci-fi,Sandbox,MMO…

                                game_details  \
0  Single-player,Multi-player,Co-op,Steam Achieve…
1          Multi-player,Online Multi-Player,Stats
2  Single-player,Multi-player,Online Multi-Player…
3  Multi-player,Online Multi-Player,Steam Worksho…
4  Multi-player,Online Multi-Player,MMO,Co-op,Onl…

                                   languages  achievements  \
0  English,French,Italian,German,Spanish - Spain,…          54.0
1  English,Korean,Simplified Chinese,French,Germa…          37.0
2                English,French,German,Russian         128.0
3  English,French,Italian,German,Spanish - Spain,…           NaN
4                English,German,Russian,French           NaN

                                       genre  \
0                                     Action
1          Action,Adventure,Massively Multiplayer
2                   Action,Adventure,Strategy
3          Action,Adventure,Massively Multiplayer
4  Action,Free to Play,Massively Multiplayer,RPG,…

                                game_description  \
0  About This Game Developed by id software, the…
1  About This Game  PLAYERUNKNOWN'S BATTLEGROUND…
```

```
2    About This Game   From original BATTLETECH/Mec…
3    About This Game The post-soviet country of Ch…
4                              About This Game

                                    mature_content  \
0                                              NaN
1    Mature Content Description  The developers de…
2                                              NaN
3                                              NaN
4                                              NaN

                              minimum_requirements  \
0  Minimum:,OS:,Windows 7/8.1/10 (64-bit versions…
1  Minimum:,Requires a 64-bit processor and opera…
2  Minimum:,Requires a 64-bit processor and opera…
3  Minimum:,OS:,Windows 7/8.1 64-bit,Processor:,I…
4  Minimum:,OS:,Windows 7,Processor:,Intel Dual C…

                          recommended_requirements original_price  \
0  Recommended:,OS:,Windows 7/8.1/10 (64-bit vers…         $19.99
1  Recommended:,Requires a 64-bit processor and o…         $29.99
2  Recommended:,Requires a 64-bit processor and o…         $39.99
3  Recommended:,OS:,Windows 10 64-bit,Processor:,…         $44.99
4  Recommended:,OS:,Windows 10,Processor:,Intel i…           Free

   discount_price
0         $14.99
1            NaN
2            NaN
3            NaN
4            NaN
```

0.1 Top 10 most rated games

```python
[3]: steam[['name','all_reviews']].sort_values(by='all_reviews', ascending=False).
     ↪head(10)
```

```
[3]:                                         name  \
     3642                             The Heiress
     8917                     Don't Starve: Hamlet
     1270  Command & Conquer: Red Alert 3 - Uprising
     8501                                  Zero-K
     9322                                  MUSYNX
     3741                     Full Throttle Remastered
     1301                          Immortal Redneck
     2023                     Turok 2: Seeds of Evil
     8553                               SUPER FLAIL
```

```
8053       Towards The Pantheon: Escaping Eternity

                                                 all_reviews
3642  Very Positive,(998),- 86% of the 998 user revi…
8917  Very Positive,(996),- 89% of the 996 user revi…
1270  Very Positive,(995),- 85% of the 995 user revi…
8501  Very Positive,(994),- 90% of the 994 user revi…
9322  Very Positive,(994),- 82% of the 994 user revi…
3741  Very Positive,(992),- 93% of the 992 user revi…
1301  Very Positive,(992),- 92% of the 992 user revi…
2023  Very Positive,(990),- 94% of the 990 user revi…
8553  Very Positive,(99),- 92% of the 99 user review…
8053  Very Positive,(99),- 90% of the 99 user review…
```

0.2 Top 10 most recent games

```
[4]: steam.release_date.dtypes
```

```
[4]: dtype('O')
```

We're going to convert the Object column to datetime64

```
[5]: recentSteam = steam
```

```
[6]: recentSteam.release_date = pd.to_datetime(steam.release_date, errors='coerce').
     ↪dropna()
```

```
[7]: recentSteam[['name','release_date']].
     ↪sort_values(by='release_date',ascending=False).head(10)
```

```
[7]:                                       name release_date
     38508                            Zoroastra    2025-04-03
     5436                      Telecube Nightmare   2023-12-25
     31581   Magical Star Pillars Anniversary Edition 2022-12-31
     31275  8-in-1 IQ Scale Bundle - Quirky Jerk (OST)  2022-07-25
     35215                       WAIFU WARS ONLINE   2022-02-02
     31356                        Captain's Tail    2022-01-01
     33776                               DEEP 8    2021-08-04
     33404                          KingOfEgyptGX   2021-06-01
     33621                             Mongrel    2021-04-01
     36842                           GreenFlame    2021-01-01
```

So it seems some upcoming games slipped into here, we can filter those.

```
[8]: from datetime import datetime
     recentSteam['release_date'].loc['1970-01-01':datetime.today().
     ↪strftime('%Y-%m-%d')].dropna()
```

4

```
[8]:  19701    2013-04-04
      19703    2013-07-31
      19704    2015-08-28
      19705    2015-07-10
      19706    2016-01-19
                   …
      20205    2018-03-08
      20206    2016-12-22
      20207    2017-01-10
      20208    2017-01-30
      20209    2016-12-08
      Name: release_date, Length: 441, dtype: datetime64[ns]
```

So, finally.

```
[9]:  today = datetime.today().strftime('%Y-%m-%d')
      recentSteam['release_date'] = recentSteam['release_date'].
       ↪loc[recentSteam['release_date'] <= today]
      recentSteam = recentSteam[['name','release_date']].
       ↪sort_values(by='release_date',ascending=False).dropna()
      recentSteam
```

```
[9]:                                           name  release_date
      38912                          Return to Nangrim    2021-01-01
      32095                                 CHROMATOSE    2021-01-01
      36842                                 GreenFlame    2021-01-01
      31466                              Star Fighters    2020-12-31
      40441  The Ghost of Joe Papp: 101 Ways To Kill Writer…    2020-12-02
      …                                             …             …
      3676                             Silent Service    1985-01-01
      5570                   The Castles of Dr. Creep    1984-11-01
      8224                                  Space Ace    1984-04-29
      2096                              Dragon's Lair    1983-06-19
      18229                 The Mystery of the Uurnog    1981-04-22

      [36698 rows x 2 columns]
```

0.3   Most popular languages

```
[ ]:
```