Video Game Sales

Jacob Brendemuehl

Question

- "What are the trends in video games sales across different platforms and genres from 2010 to 2020, and is there a correlation between critical acclaim (such as ratings) and commercial success?"
- Evolved by expanding and limiting the scope
- Video games relevancy
- Goal: To predict/estimate the factors that contribute to a video game's success the most and essentially creating a video game based off the results from the data

Getting the Data

- Factors in my data: Platforms, Genres, Sales Figures, Critic Scores/Count, User Scores/Count, Developer, and Age Rating
- 2 main factors are sales figures and Critic/User Scores
- Other factors are important and will be looked at
- Dataset is pulled from Kaggle, 11,563 unique values (aka games that were entered)

Data Wrangling

- Reduced dataset to remove null values
- Expanded scope to include all factors, and also limited it as well.
- Ex: Timeframe (2010-2020) and used specific factors

```
[jkbrende@guardian portfolio]$ head -n 10 Video_game_data.csv | column -s, -t
Name                      Platform  Year_of_Release  Genre         Publisher     NA_Sales  EU_Sales  JP_Sales  Other_Sales  Global_Sales  Critic_Score  Critic_Count  User_Score  User_Count  Developer             Rating
Wii Sports                Wii       2006             Sports        Nintendo      41.36     28.96     3.77      8.45         82.53         76            51            8           322         Nintendo              E
Super Mario Bros.         NES       1985             Platform      Nintendo      29.08     3.58      6.81      0.77         40.24
Mario Kart Wii            Wii       2008             Racing        Nintendo      15.68     12.76     3.79      3.29         35.52         82            73            8.3         709         Nintendo              E
Wii Sports Resort         Wii       2009             Sports        Nintendo      15.61     10.93     3.28      2.95         32.77         80            73            8           192         Nintendo              E
Pokemon Red/Pokemon Blue  GB        1996             Role-Playing  Nintendo      11.27     8.89      10.22     1            31.37
Tetris                    GB        1989             Puzzle        Nintendo      23.2      2.26      4.22      0.58         30.26
New Super Mario Bros.     DS        2006             Platform      Nintendo      11.28     9.14      6.5       2.88         29.8          89            65            8.5         431         Nintendo              E
Wii Play                  Wii       2006             Misc          Nintendo      13.96     9.18      2.93      2.84         28.92         58            41            6.6         129         Nintendo              E
New Super Mario Bros. Wii Wii       2009             Platform      Nintendo      14.44     6.94      4.7       2.24         28.32         87            80            8.4         594         Nintendo              E
```

```
[jkbrende@guardian portfolio]$ awk -F',' '{complete_row = 1; for (i=1; i<=NF; i++) { if ($i == "") {complete_row = 0; break; } } if(complete_row == 1) { print $0; } }' Video_game_data.csv | head -n 10 | column -s, -t
Name                      Platform  Year_of_Release  Genre     Publisher               NA_Sales  EU_Sales  JP_Sales  Other_Sales  Global_Sales  Critic_Score  Critic_Count  User_Score  User_Count  Developer            Rating
Wii Sports                Wii       2006             Sports    Nintendo                41.36     28.96     3.77      8.45         82.53         76            51            8           322         Nintendo             E
Mario Kart Wii            Wii       2008             Racing    Nintendo                15.68     12.76     3.79      3.29         35.52         82            73            8.3         709         Nintendo             E
Wii Sports Resort         Wii       2009             Sports    Nintendo                15.61     10.93     3.28      2.95         32.77         80            73            8           192         Nintendo             E
New Super Mario Bros.     DS        2006             Platform  Nintendo                11.28     9.14      6.5       2.88         29.8          89            65            8.5         431         Nintendo             E
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New Super Mario Bros. Wii Wii       2009             Platform  Nintendo                14.44     6.94      4.7       2.24         28.32         87            80            8.4         594         Nintendo             E
Mario Kart DS             DS        2005             Racing    Nintendo                9.71      7.47      4.13      1.9          23.21         91            64            8.6         464         Nintendo             E
Wii Fit                   Wii       2007             Sports    Nintendo                8.92      8.03      3.6       2.15         22.7          80            63            7.7         146         Nintendo             E
Kinect Adventures!        X360      2010             Misc      Microsoft Game Studios  15        4.89      0.24      1.69         21.81         61            45            6.3         106         Good Science Studio  E
```

Exploring the Data

- Data from dataset is from MetaCritic
- Reviews were made for the most popular developers (Ex: Nintendo, Ubisoft, EA, etc.)
- Hypothesis was the higher the review the more money it would make globally in sales
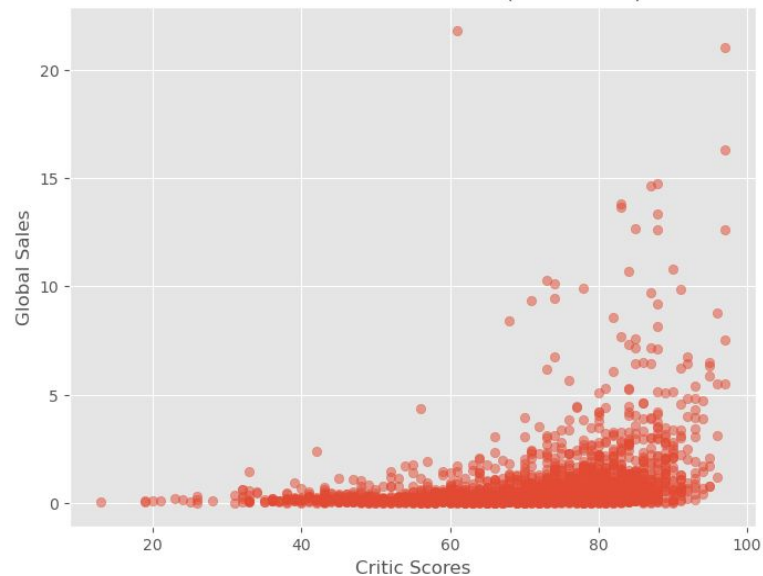- Reviews were based off this index:

	Indication	Video games	Films/television/music
	Universal acclaim	90–100	81–100
	Generally favorable	75–89	61–80
	Mixed or average	50–74	40–60
	Generally unfavorable	20–49	20–39
	Overwhelming dislike	0–19	

Score index[18]

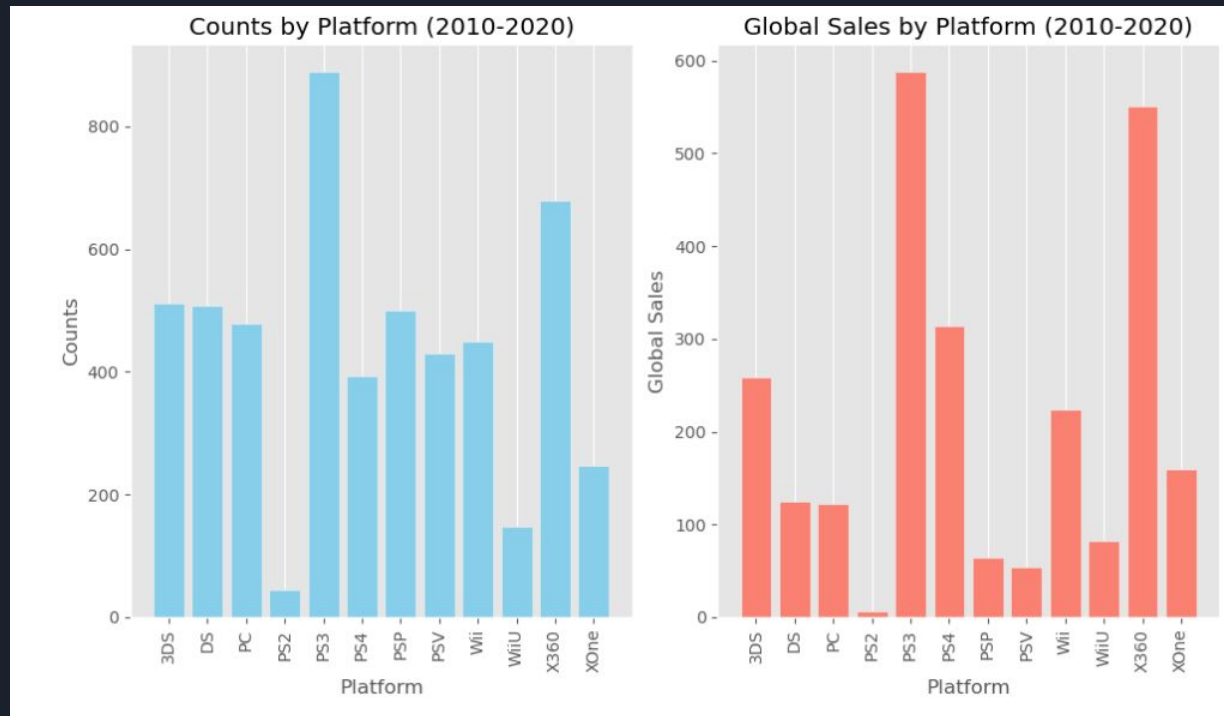# Visualization/Results

Global Sales vs User Score (2010-2020)
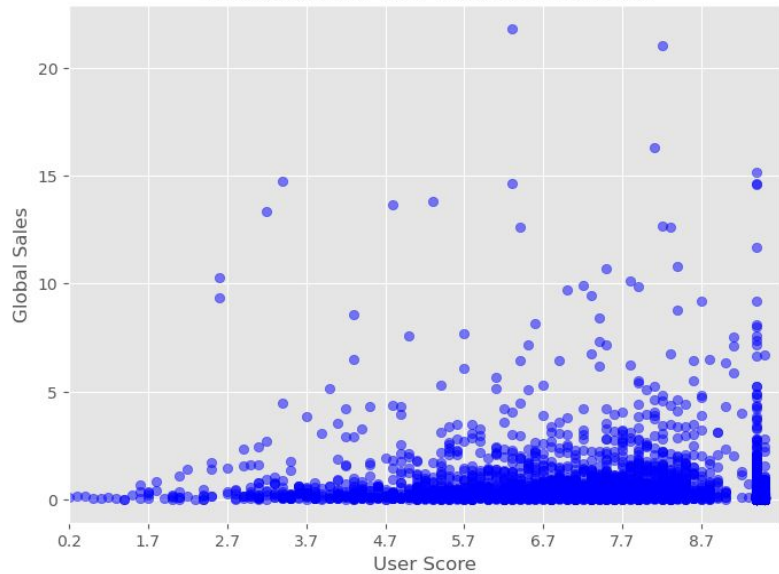
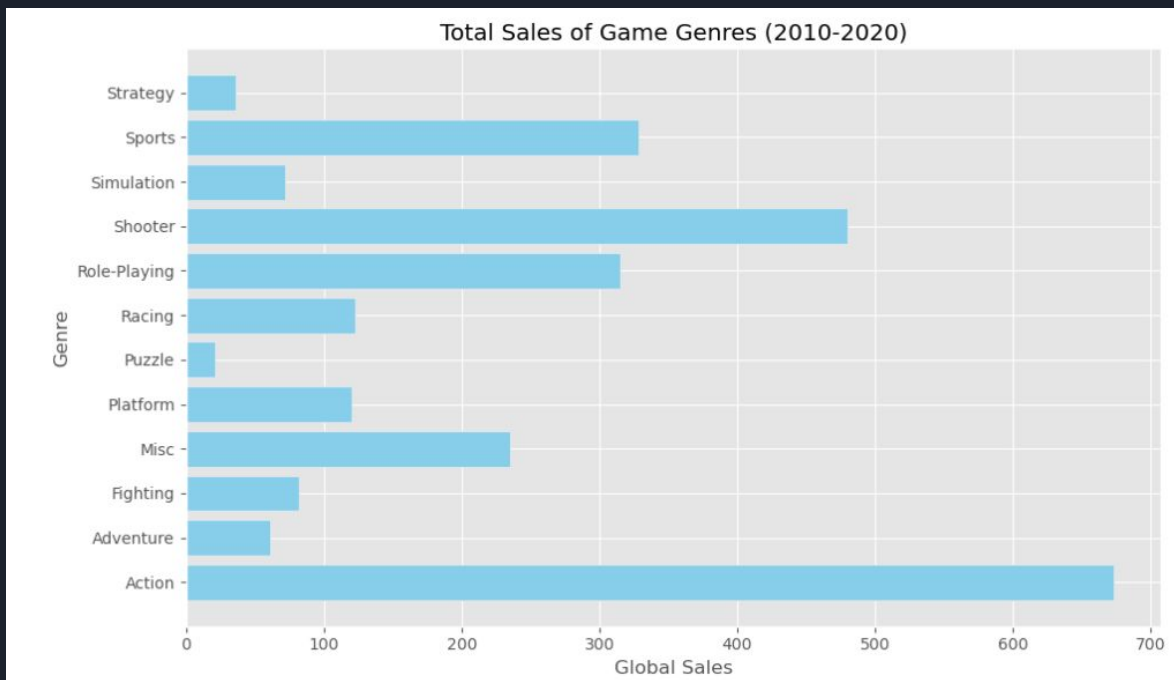Global Sales vs Critic Scores (2010-2020)

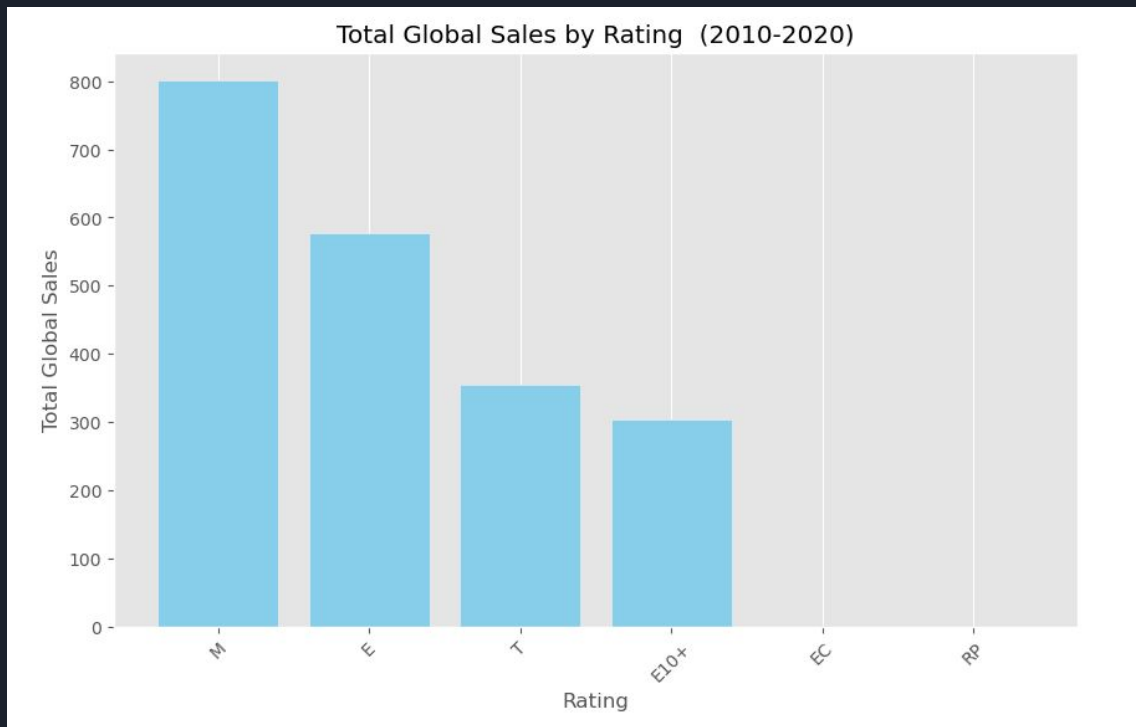# Visualization/Results Pt. 2
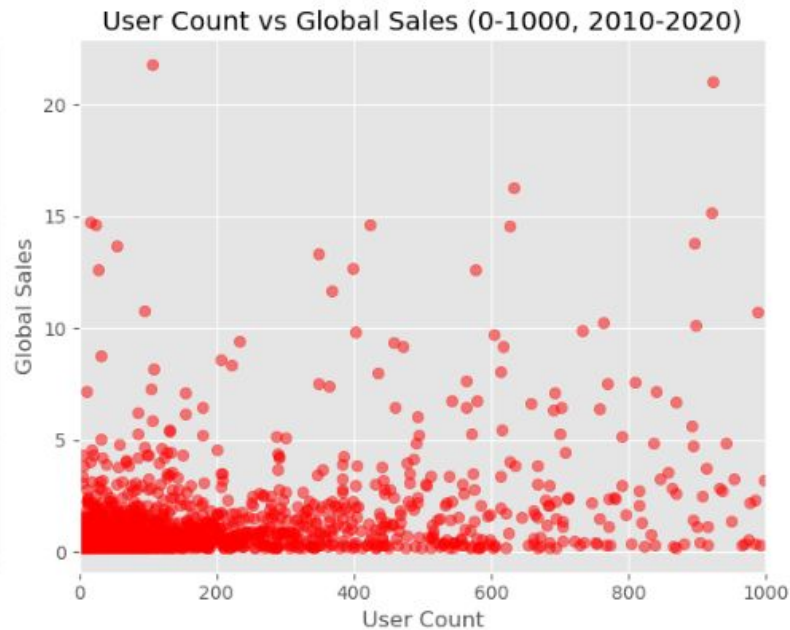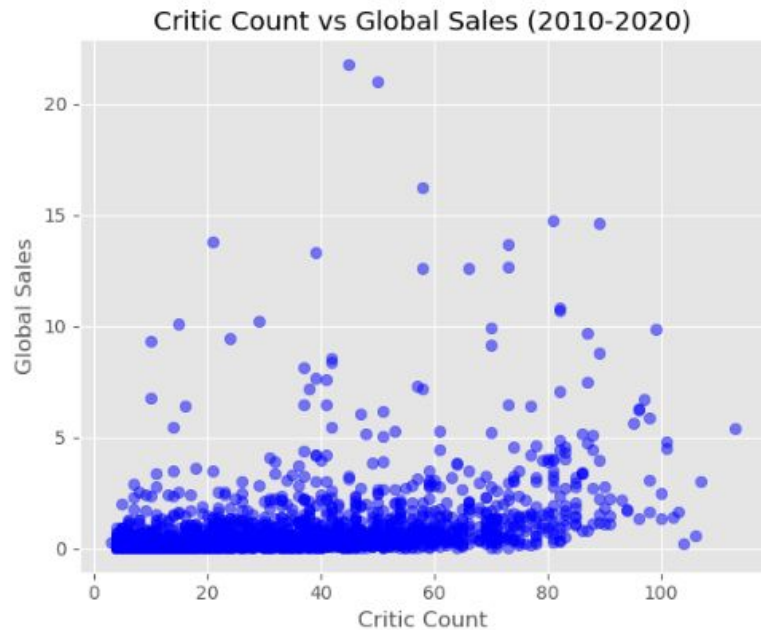
Visualization/Results Pt. 3

Visualization/Results Pt. 3

Total Sales of Game Genres (2010-2020)

Genre	Count
Action	1496
Misc	576
Sports	575
Role-Playing	570
Adventure	563
Shooter	410
Racing	237
Simulation	218
Fighting	199
Strategy	170
Platform	153
Puzzle	114

Visualization/Results Pt.4

Conclusion

- Hypothesis
- Quality and Reviews
- The ideal video game
- Future