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Assignment 1

**Case Problem: all-time movie box-office data**

Managerial Report

By looking at the trendline, we can notice a negative line which indicates a decrease in US box-office receipts revenue over time. However, it is a very slight decrease which is inconsiderable. Therefore, we can say although we observe a slight decrease in revenue over time, we can conclude that the US box-office receipts revenues are almost constant over time.

This scatter chart indicates a positive relationship between the movie’s budget and the world box-office.

As the budget increases, the revenues also increase.

In this scatter chart, we observe a negative relationship between the movie’s inflation adjusted budget and the inflation adjusted world box-office. As we increase the budget, the revenues decrease. This is different from the previous question. This can be explained by the effect of inflation which has a negative impact on the world box-office receipts.

|  |  |  |  |
| --- | --- | --- | --- |
| Frequency | | Percent frequency | |
| 3 |  | 6% |  |
| 19 |  | 38% |  |
| 9 |  | 18% |  |
| 5 |  | 10% |  |
| 6 |  | 12% |  |
| 1 |  | 2% |  |
| 3 |  | 6% |  |
| 2 |  | 4% |  |
| 0 |  | 0% |  |
| 0 |  | 0% |  |
| 1 |  | 2% |  |
| 0 |  | 0% |  |
| 1 |  | 2% |  |

We notice that most inflation adjusted US box-office receipts fall below 700 million revenues.

We can also observe 2 outliers.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |
| **Count of Year Released** | **Column Labels** |  |  |  |  |  |  |
| **Row Labels** | **G** | **PG** | **PG-13** | **R** | **UR** | **Grand Total** |  |
| Action | 1 | 2 | 3 |  |  | 6 |  |
| Animated | 8 | 1 |  |  |  | 9 |  |
| Comedy |  | 2 |  | 2 |  | 4 |  |
| Drama | 4 | 5 | 3 | 1 | 2 | 15 |  |
| Horror |  |  |  | 1 |  | 1 |  |
| Musical | 2 |  |  |  |  | 2 |  |
| SciFi/Fantasy |  | 6 | 6 |  |  | 12 |  |
| Western |  | 1 |  |  |  | 1 |  |
| **Grand Total** | **15** | **17** | **12** | **4** | **2** | **50** |  |
|  |  |  |  |  |  |  |  |

The most represented for genre and rating movies are:

* Animated PG
* SciFi/Fantasy PG or PG-13

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Year Released | (Multiple Items) |  |  |  |  |  |
|  |  |  |  |  |  |  |
| **Count of Year Released** | **Column Labels** |  |  |  |  |  |
| **Row Labels** | **G** | **PG** | **PG-13** | **R** | **Grand Total** |  |
| Action |  | 1 | 3 |  | 4 |  |
| Animated | 1 | 1 |  |  | 2 |  |
| Comedy |  | 1 |  | 1 | 2 |  |
| Drama |  |  | 2 |  | 2 |  |
| SciFi/Fantasy |  | 5 | 6 |  | 11 |  |
| **Grand Total** | **1** | **8** | **11** | **1** | **21** |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

SciFi/Fantasy PG and SciFi/Fantasty PG-13 are most represented for movies after 1980. Over time, moviegoers preferred to watch SciFi/Fantasy with rating PG or rating PG-13.

* Drama movies bring the highest inflation adjusted US box-office receipts revenues with G rating
* On the other side Action movies bring the lowest revenues with G rating
* In general, movies with the G rating have the highest revenue
* In average, Movies with UR rating have the smallest revenue
* In general, musical movies have a highest average revenue.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | (All) |  |  |  |  |  |
|  |  |  |  |  |  |  |
| **Average of U.S. Box Office Receipts (Inflation Adjusted Millions $)** | **Column Labels** |  |  |  |  |  |
| **Row Labels** | **G** | **PG** | **PG-13** | **R** | **UR** | **Grand Total** |
| Action | 506.60 | 856.35 | 664.10 |  |  | 701.93 |
| Animated | 696.63 | 557.40 |  |  |  | 681.16 |
| Comedy |  | 545.00 |  | 521.65 |  | 533.33 |
| Drama | 1016.18 | 612.28 | 895.77 | 622.80 | 519.85 | 765.06 |
| Horror |  |  |  | 808.70 |  | 808.70 |
| Musical | 915.25 |  |  |  |  | 915.25 |
| SciFi/Fantasy |  | 884.12 | 550.47 |  |  | 717.29 |
| Western |  | 553.00 |  |  |  | 553.00 |
| **Grand Total** | **798.32** | **722.31** | **665.20** | **618.70** | **519.85** | **715.02** |