

# OMDB AND THE OSCARS



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## Oscar Winning Movie List

This project started with the Oscar Winning Movies List from 1929 to 2022. The file contains the year, movie name, winning award count and nomination count.

### API

Using the OMDB API we were able to request info by movie name. Due to the API's daily request limit of 1000, the API requests were run by 2 teammates, splitting the rows to use into two dataframes, which were then merged.

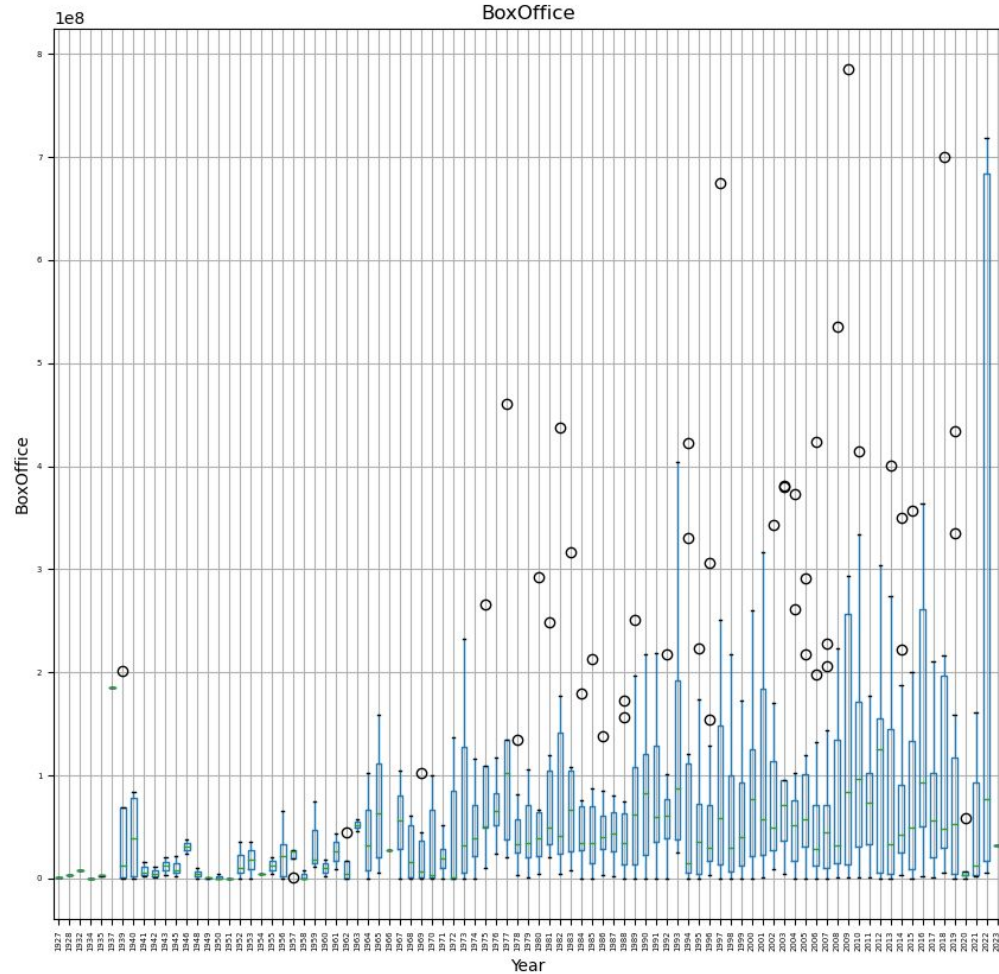


# Analysis Questions

- Historical box office info: actual sales from when this movie was released
  - Best Selling Movies
  - Is there a correlation between Oscars awarded or nominated and box office performance?
- Box office and commodity prices, how are they correlated?
- Is the runtime of a movie related to its Oscars performance?

## JIAOLU – Original Data on Boxoffice over the Years

As a matter of common sense, the dollar and its purchasing capacity is decreasing due to accumulated inflation rate. The box plot on box office shows older movies have much lower box office compared to new movies. If we try to evaluate the popularity or best seller of a movie at its time, original box office value is not ideal.



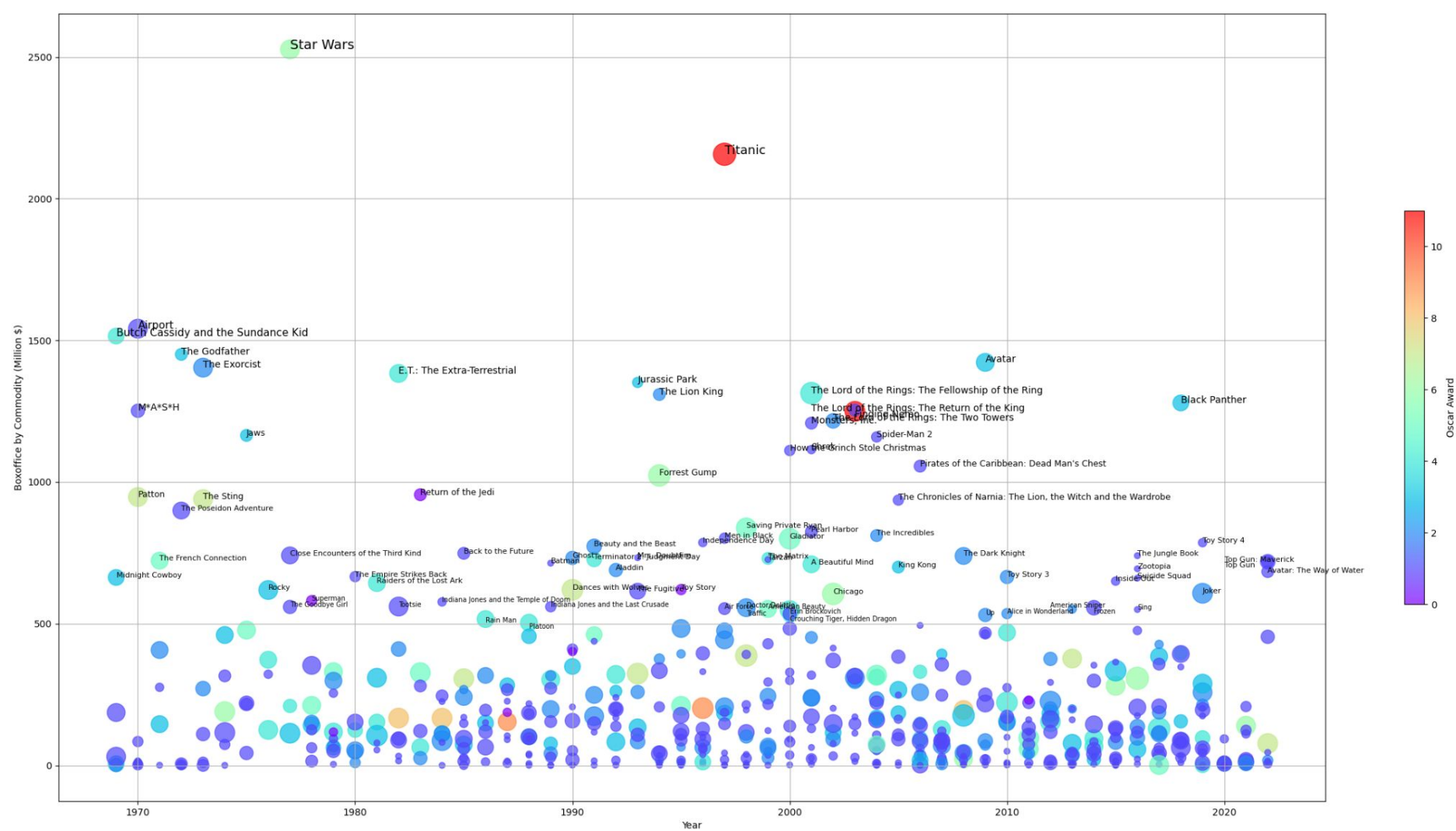
## JIAOLU – Commodity boxoffice

Therefore, introducing commodities as evaluators is an approach. 2 commodities are choices at this time, wheat and gold.

The boxoffice is transferred to commodities quantities at its time then converted to the value those commodities worth in 2022. To balance the value, we decided to set commodity boxoffice = 80% wheat value + 20% gold value.

	Year	wheat_dollar_bushel
<b>count</b>	63.000000	63.000000
<b>mean</b>	1991.000000	3.808776
<b>std</b>	18.330303	1.766088
<b>min</b>	1960.000000	1.328600
<b>25%</b>	1975.500000	2.681600
<b>50%</b>	1991.000000	3.508600
<b>75%</b>	2006.500000	4.641250
<b>max</b>	2022.000000	9.532400

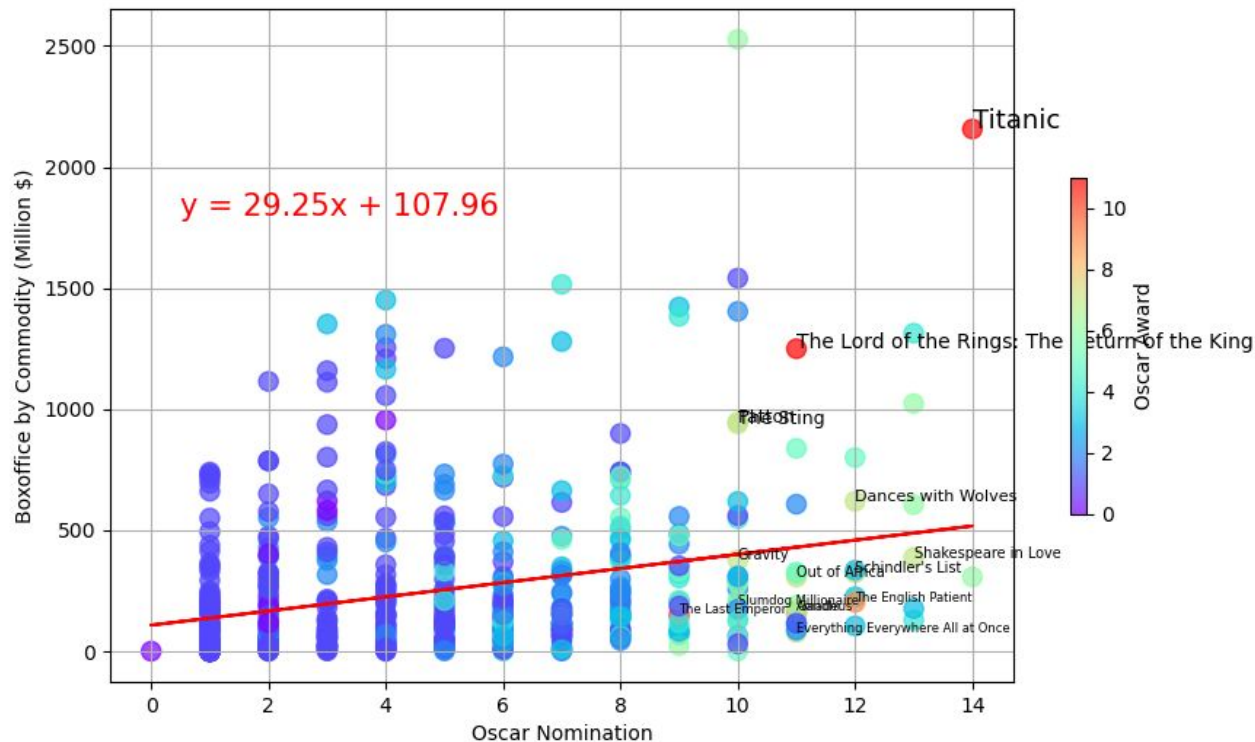
	Year	gold_dollar_ounce
<b>count</b>	54.000000	54.000000
<b>mean</b>	1995.500000	614.832407
<b>std</b>	15.732133	522.134252
<b>min</b>	1969.000000	35.960000
<b>25%</b>	1982.250000	297.342500
<b>50%</b>	1995.500000	383.900000
<b>75%</b>	2008.750000	948.337500
<b>max</b>	2022.000000	1864.110000





	Year	Oscar_Film	Commodity_Million	BoxOffice_Million	Oscar_Award	Oscar_Nomination	Genre
0	1977	Star Wars	2527.01	461.00	6	10	Action, Adventure, Fantasy
1	1997	Titanic	2157.07	674.29	11	14	Drama, Romance
2	1970	Airport	1541.37	100.49	1	10	Action, Drama, Thriller
3	1969	Butch Cassidy and the Sundance Kid	1515.29	102.31	4	7	Biography, Crime, Drama
4	1972	The Godfather	1450.64	136.38	3	4	Crime, Drama
5	2009	Avatar	1422.42	785.22	3	9	Action, Adventure, Fantasy
6	1973	The Exorcist	1403.84	233.01	2	10	Horror
7	1982	E.T.: The Extra-Terrestrial	1383.28	437.14	4	9	Adventure, Family, Sci-Fi
8	1993	Jurassic Park	1351.66	404.21	3	3	Action, Adventure, Sci-Fi
9	2001	The Lord of the Rings: The Fellowship of the Ring	1313.85	316.12	4	13	Action, Adventure, Drama
10	1994	The Lion King	1309.11	422.78	2	4	Animation, Adventure, Drama
11	2018	Black Panther	1279.29	700.43	3	7	Action, Adventure, Sci-Fi
12	2003	Finding Nemo	1254.24	380.84	1	4	Animation, Adventure, Comedy
13	1970	M*A*S*H	1251.63	81.60	1	5	Comedy, Drama, War
14	2003	The Lord of the Rings: The Return of the King	1249.58	379.43	11	11	Action, Adventure, Drama
15	2002	The Lord of the Rings: The Two Towers	1216.05	342.95	2	6	Action, Adventure, Drama
16	2001	Monsters, Inc.	1207.97	290.64	1	4	Animation, Adventure, Comedy
17	1975	Jaws	1164.68	265.86	3	4	Adventure, Mystery, Thriller
18	2004	Spider-Man 2	1159.11	373.59	1	3	Action, Adventure, Sci-Fi
19	2001	Shrek	1114.54	268.16	1	2	Animation, Adventure, Comedy
20	2000	How the Grinch Stole Christmas	1111.16	260.72	1	3	Comedy, Family, Fantasy
21	2006	Pirates of the Caribbean: Dead Man's Chest	1056.13	423.32	1	4	Action, Adventure, Fantasy
22	1994	Forrest Gump	1023.23	330.46	6	13	Drama, Romance
23	1983	Return of the Jedi	955.34	316.57	0	4	Action, Adventure, Fantasy
24	1970	Patton	947.16	61.75	7	10	Biography, Drama, War

## Regression of Nomination vs Commodity BoxOffice



LinregressResult

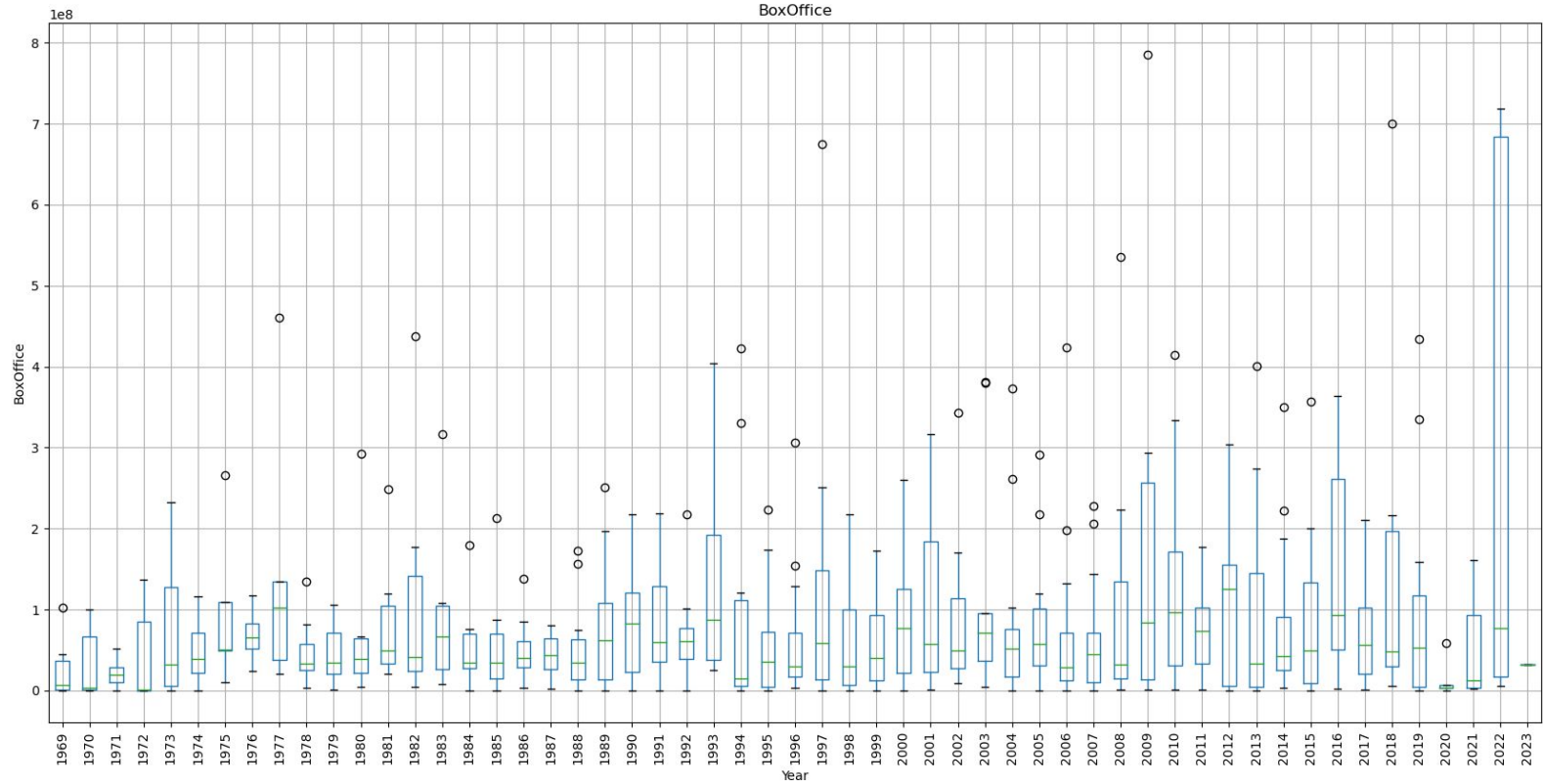
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 pvalue=5.06789247514218e-13,  
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Oscar Nominated movies have a slightly better chance to achieve higher commercial gain, but there is no statistical evidence to prove Nomination and commercial success are correlated.



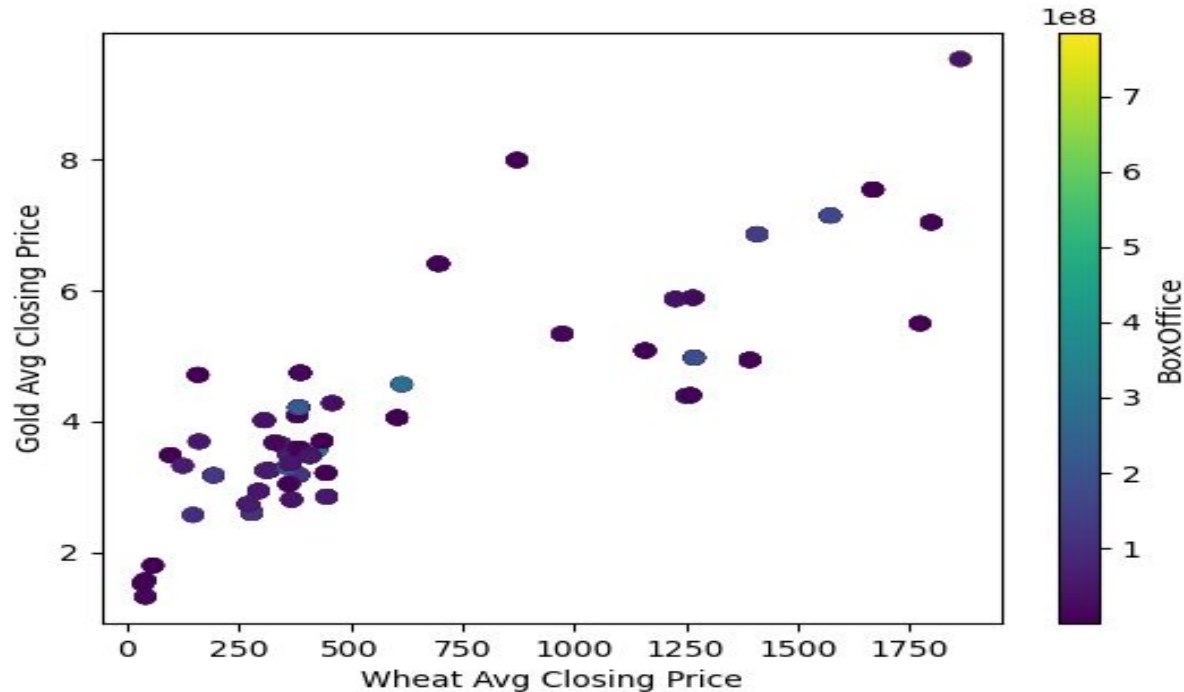
# UWAGBOE – COMMODITIES AND BOX OFFICE

Boxplot grouped by Year



# RELATIONSHIP BETWEEN WHEAT PRICE AND GOLD PRICE

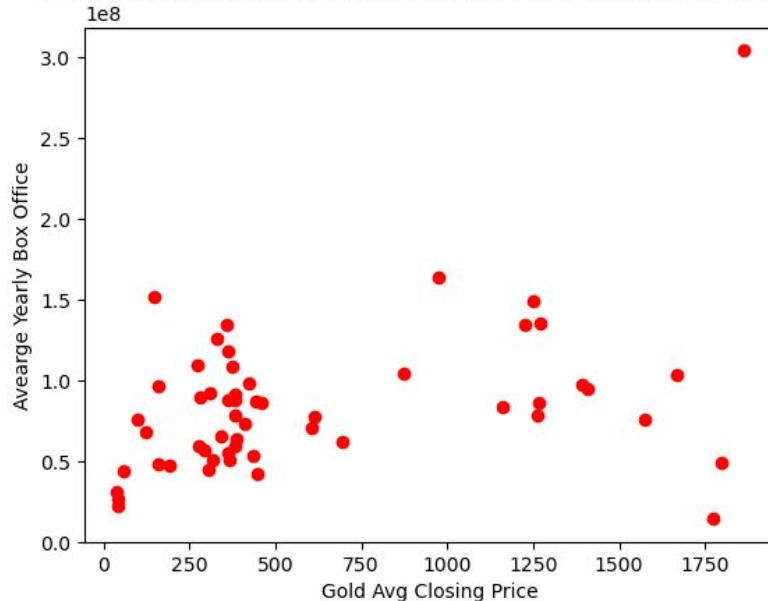
- The diagram below shows the relationship between the average closing price of Wheat and Gold using a scatter plot.
- From the scatter plot, there is a fairly positive correlation between the two commodities.



# CORRELATION BETWEEN WHEAT PRICE, GOLD PRICE, AND BOX OFFICE

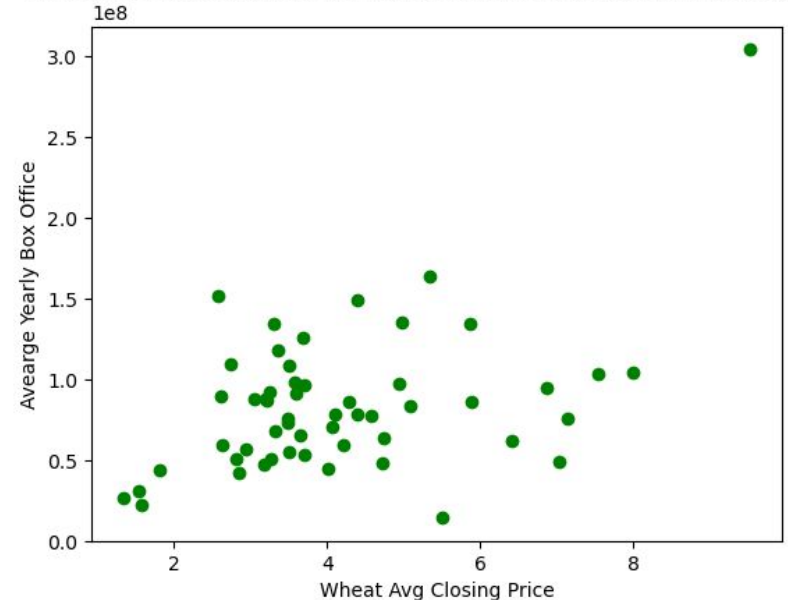
In this part, we aim to find the correlation between the average gold closing price and the average box office. Using Pearson's correlation, the correlation is 0.4654194795917861 which indicates a medium correlation

Correlation between Avg Gold closing price and Avg yearly Box Office



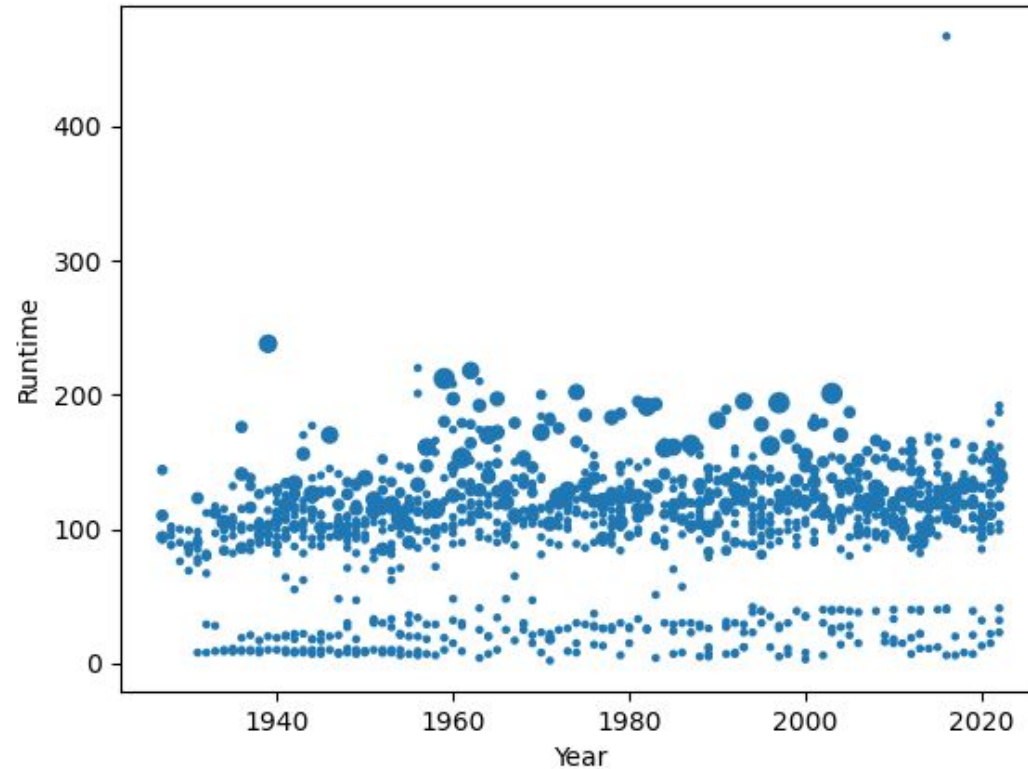
In this part, we aim to find the correlation between the average wheat closing price and the average box office. Using Pearson's correlation, the correlation is 0.3781675958210432 which indicates a medium correlation

Correlation between Avg Wheat closing price and Avg yearly Box Office

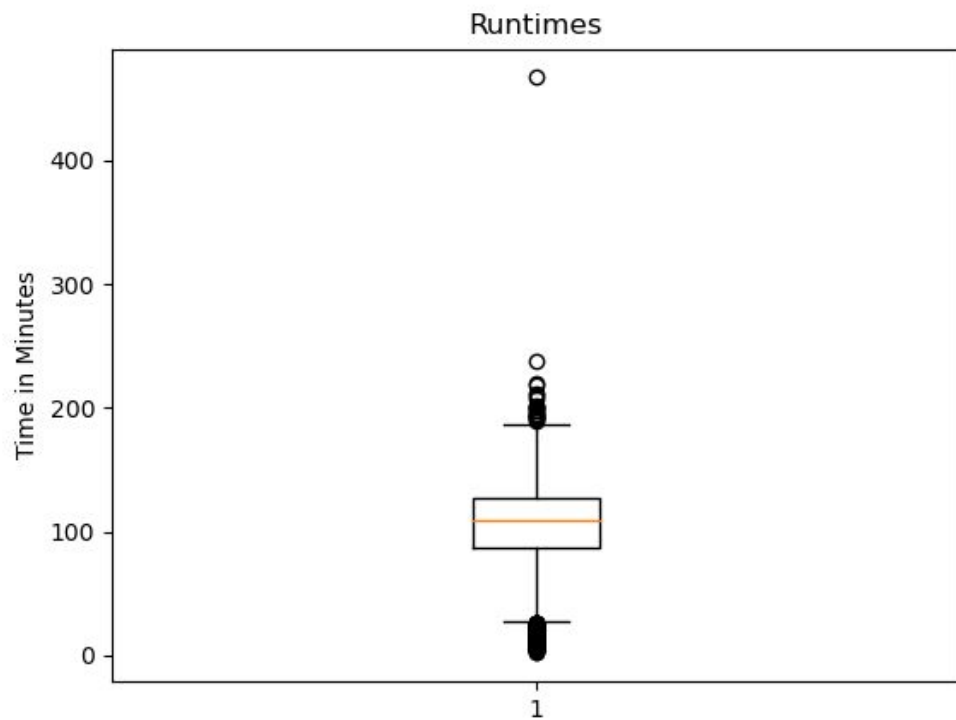


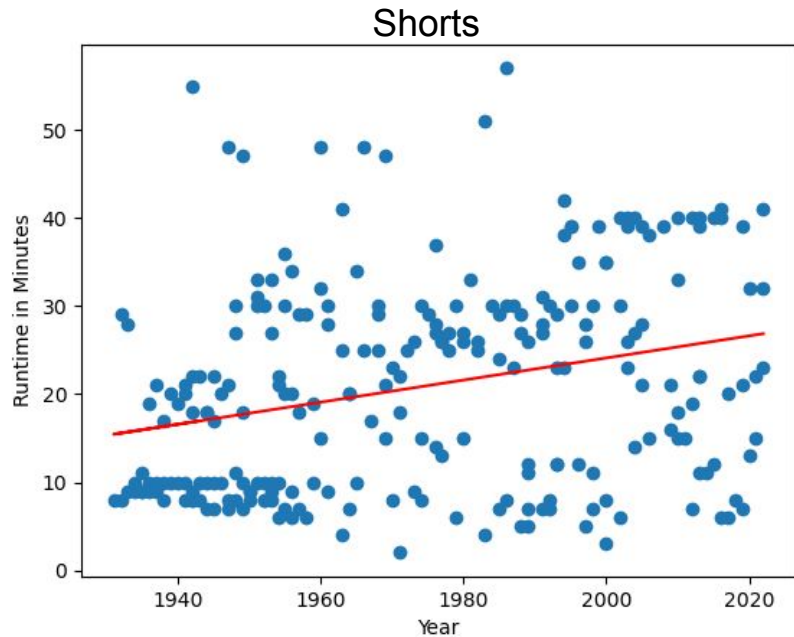
ERIK – RUNTIMES VS  
AWARDS

Oscars Won, by Year and Runtime

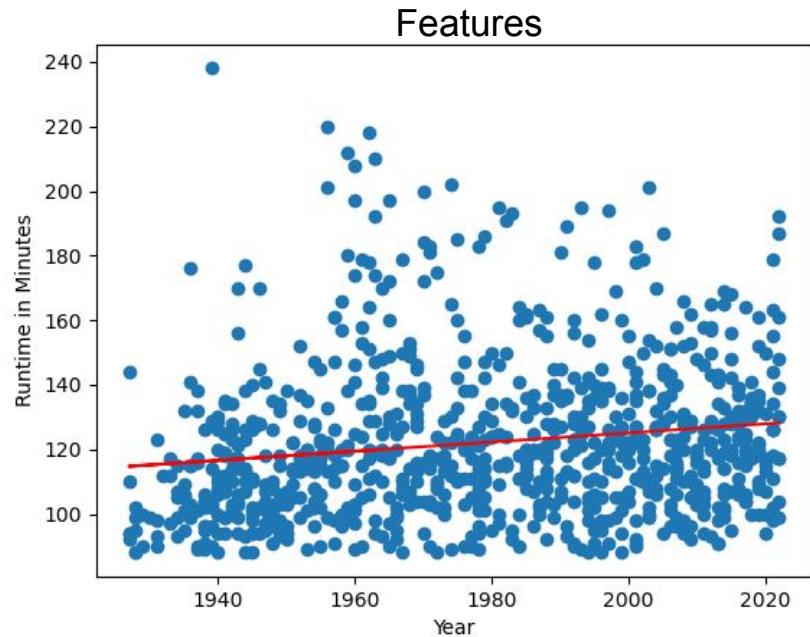


	Oscars Won	Runtime
<b>count</b>	1177.000000	1177.000000
<b>mean</b>	1.666950	99.523364
<b>std</b>	1.446155	47.640587
<b>min</b>	1.000000	2.000000
<b>25%</b>	1.000000	87.000000
<b>50%</b>	1.000000	109.000000
<b>75%</b>	2.000000	127.000000
<b>max</b>	11.000000	467.000000





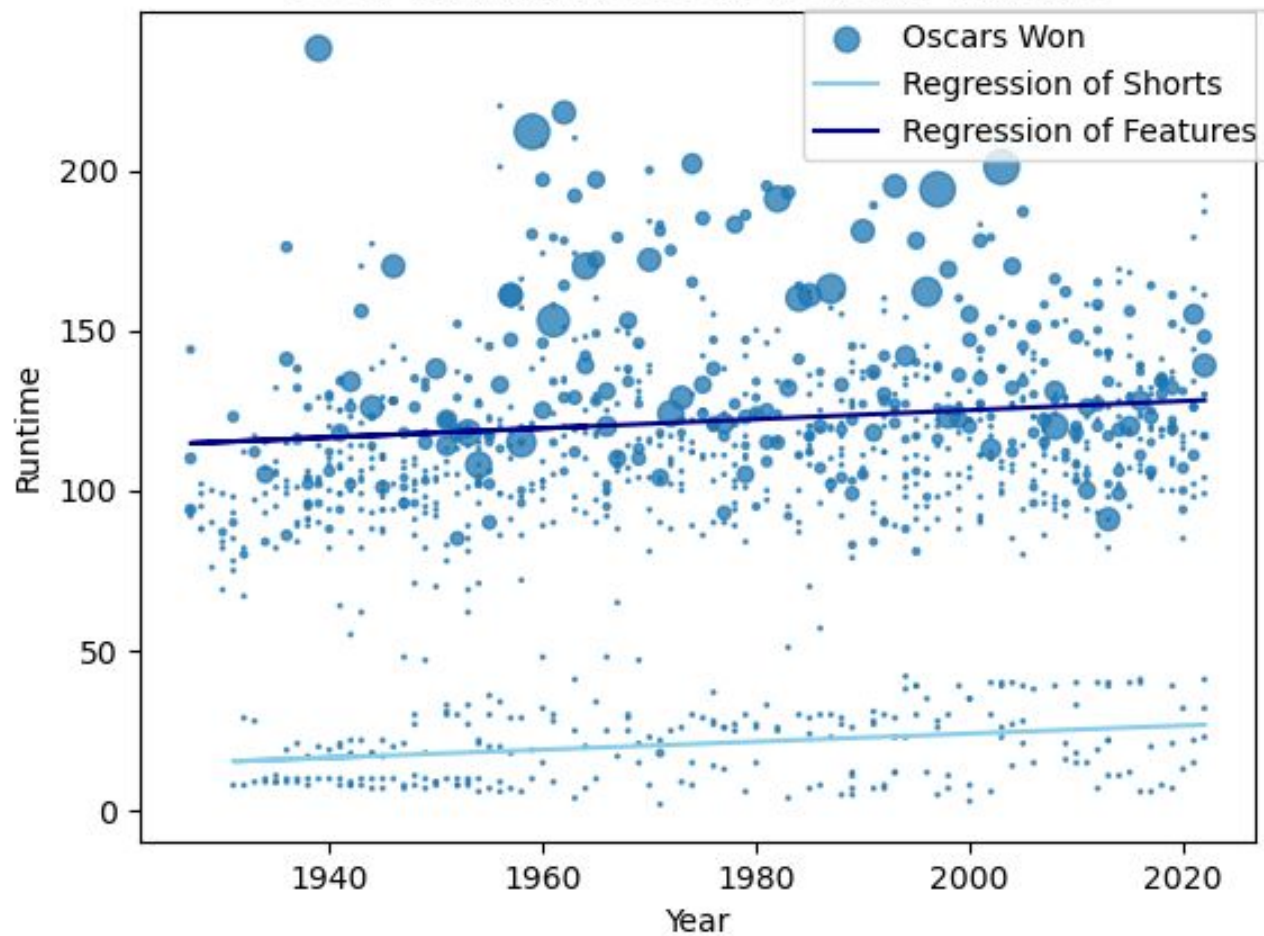
14 The r-squared is: 0.07643679126365567, and the r-value is 0.2764720442714881, while the p-value is 1.1750222747523134e-05



The r-squared is: 0.024740654277562304, and the r-value is 0.15729162176531306, while the p-value is 2.750724363451114e-06



Oscar-Winning Movies by Year and Runtime



# Questions?

