



Disney Gross Prediction before Covid

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The data





The dataset

RangeIndex: 579 entries, 0 to 578

Data columns (total 6 columns):

#	Column	Non-Null Count	Dtype
0	movie_title	579 non-null	object
1	release_date	579 non-null	object
2	genre	562 non-null	object
3	mpaa_rating	523 non-null	object
4	total_gross	579 non-null	int64
5	inflation_adjusted_gross	579 non-null	int64

dtypes: int64(2), object(4)

memory usage: 27.3+ KB



The Top Ten

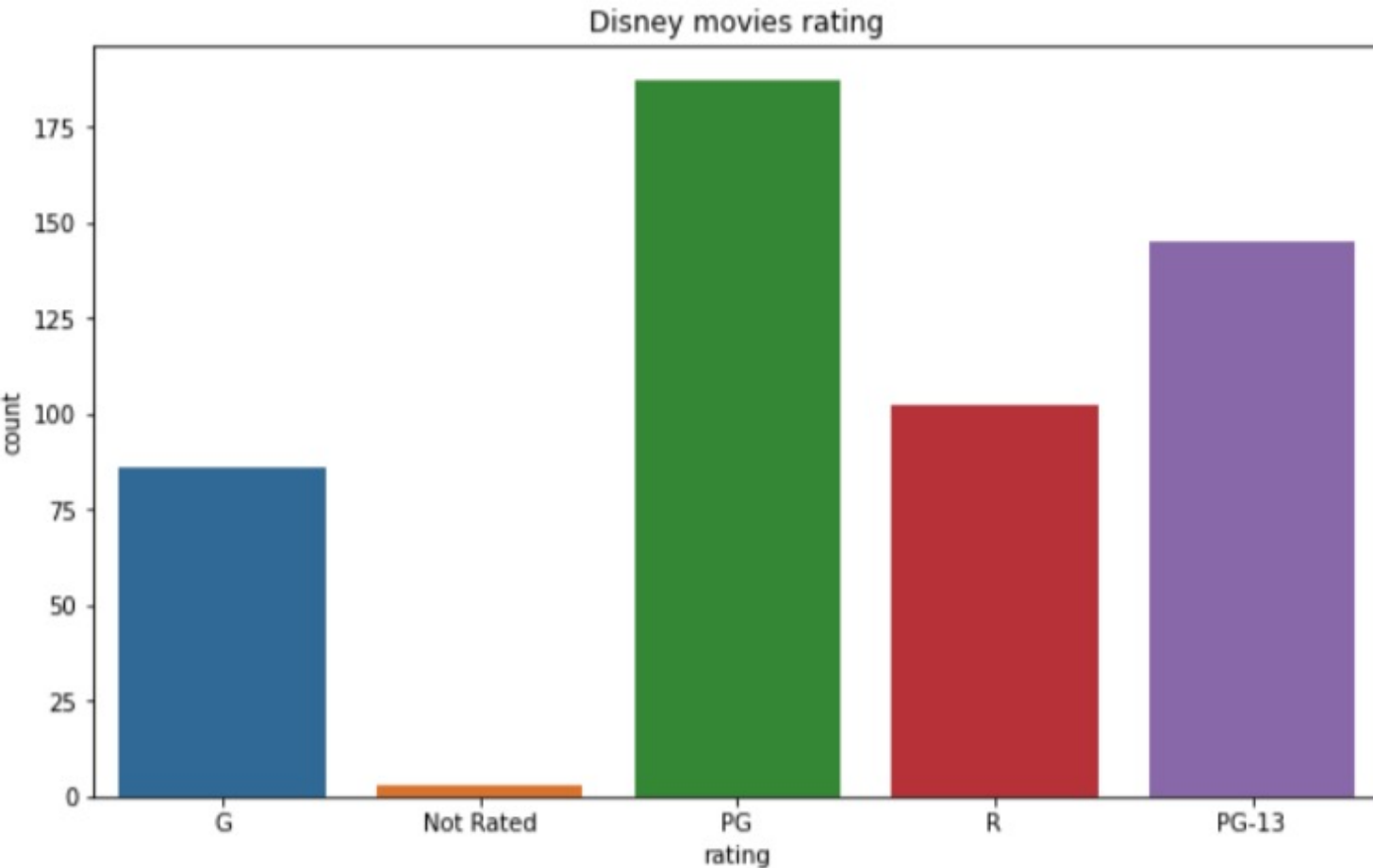


Top ten movies at the box office

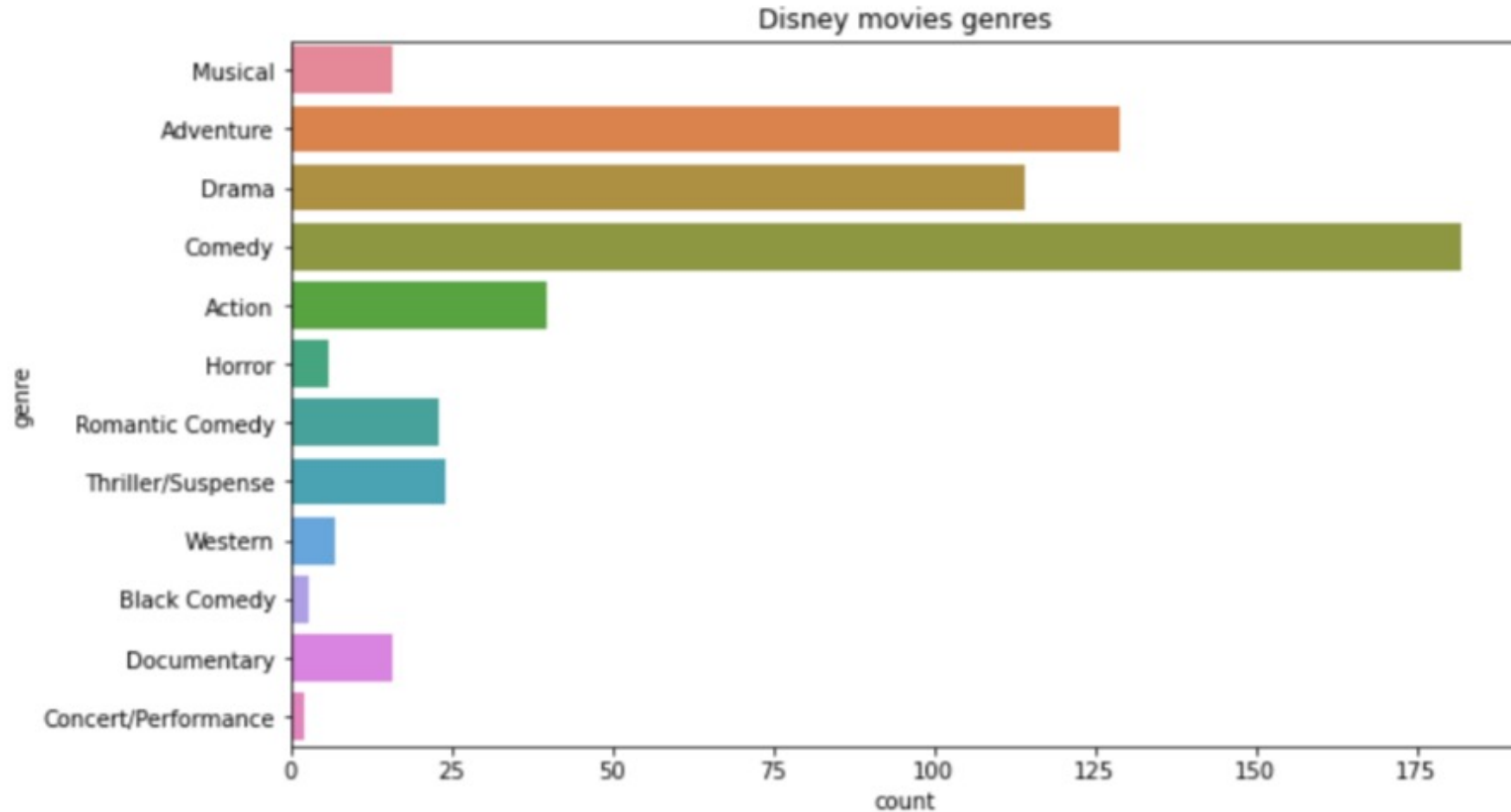
	movie_title	release_date	...	inflation_adjusted_gross	year
0	Snow White and the Seven Dwarfs	1937-12-21	...	5228953251	1937
1	Pinocchio	1940-02-09	...	2188229052	1940
2	Fantasia	1940-11-13	...	2187090808	1940
8	101 Dalmatians	1961-01-25	...	1362870985	1961
6	Lady and the Tramp	1955-06-22	...	1236035515	1955
3	Song of the South	1946-11-12	...	1078510579	1946
564	Star Wars Ep. VII: The Force Awakens	2015-12-18	...	936662225	2015
4	Cinderella	1950-02-15	...	920608730	1950
13	The Jungle Book	1967-10-18	...	789612346	1967
179	The Lion King	1994-06-15	...	761640898	1994



Top Disney movies ratings



Disney movies genre



Disney top 10 movies based on the adjusted gross revenue

	movie_title	release_date	genre	mpaa_rating	total_gross	inflation_adjusted_gross
0	Snow White and the Seven Dwarfs	1937-12-21	Musical	G	184925485	5228953251
1	Pinocchio	1940-02-09	Adventure	G	84300000	2188229052
2	Fantasia	1940-11-13	Musical	G	83320000	2187090808
8	101 Dalmatians	1961-01-25	Comedy	G	153000000	1362870985
6	Lady and the Tramp	1955-06-22	Drama	G	93600000	1236035515
3	Song of the South	1946-11-12	Adventure	G	65000000	1078510579
564	Star Wars Ep. VII: The Force Awakens	2015-12-18	Adventure	PG-13	936662225	936662225
4	Cinderella	1950-02-15	Drama	G	85000000	920608730
13	The Jungle Book	1967-10-18	Musical	Not Rated	141843000	789612346
179	The Lion King	1994-06-15	Adventure	G	422780140	761640898



The models





Linear Regression

```
lr.coef_: [-8.45002932e+06  1.01818807e+08  8.27411943e+07  2.56580750e+06  
-2.19454233e+07 -5.54481363e+07 -5.36866076e+07 -7.55319603e+06  
-1.49890758e+07  2.26675833e+07 -8.20049795e+07 -4.81507318e+07  
 3.74320484e+07  3.65527103e+07  1.18872000e+08 -1.39628293e+08  
 3.79678983e+07  3.23053587e+07 -4.95169640e+07]  
lr.intercept_: 16965870867.160162  
lr train score 0.310, lr test score: 0.237
```





Support Vector Regression

svr train score -0.081, svr test score: -0.045





Decision Tree Regression

svr train score -0.081, svr test score: -0.045





Random Forest



forest train score 0.874, forest test score: 0.503



The Gross Profit

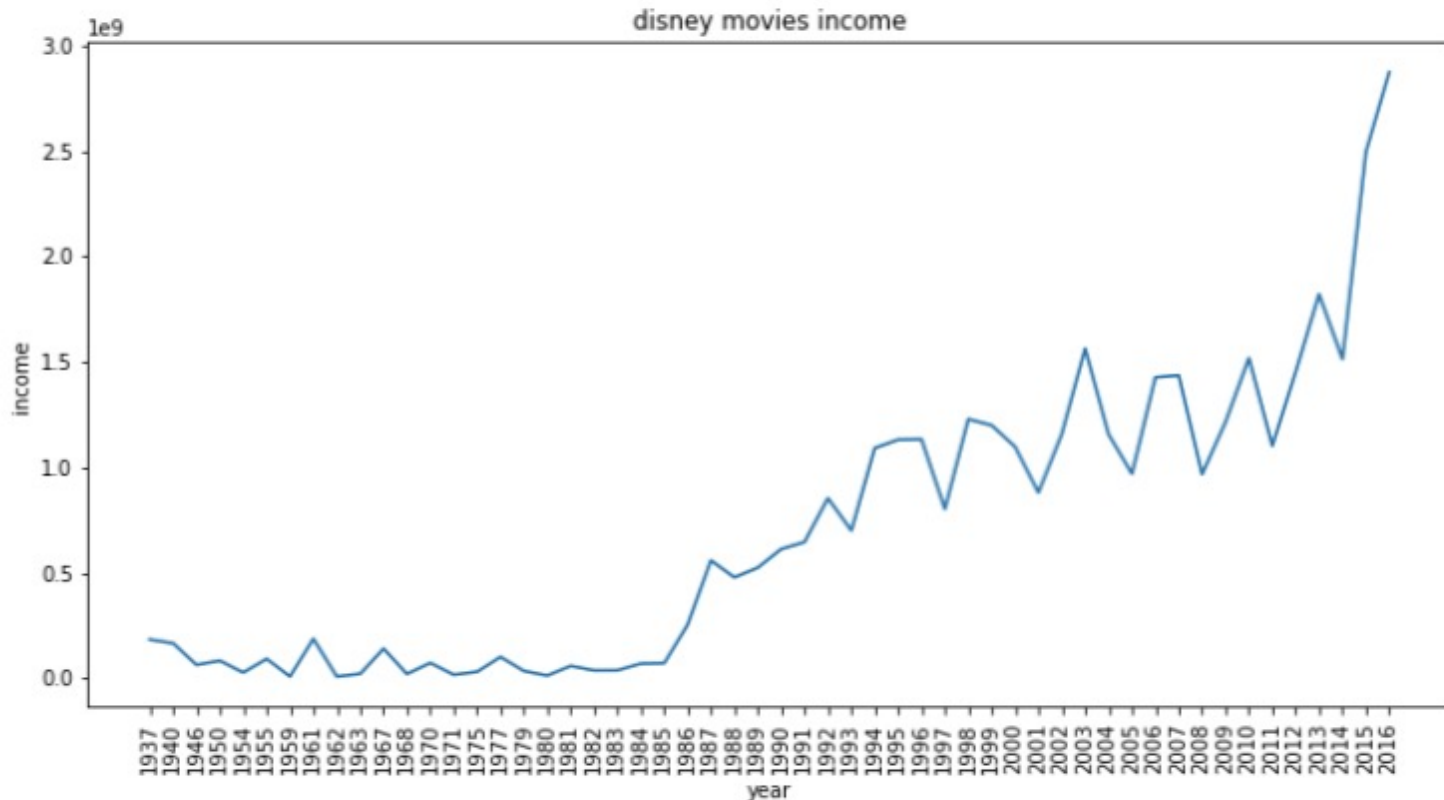


Disney Gross per genre



	genre	avg_gross
0	Documentary	12718026.0
1	Horror	23413849.0
2	Other	24506892.0
3	Black Comedy	52243492.0
4	Concert/Performance	57410839.0
5	Drama	72529243.0
6	Western	73815707.0
7	Romantic Comedy	77777084.0
8	Comedy	84667730.0
9	Thriller/Suspense	89653790.0
10	Action	140998379.0
11	Adventure	190397412.0
12	Musical	603597861.0

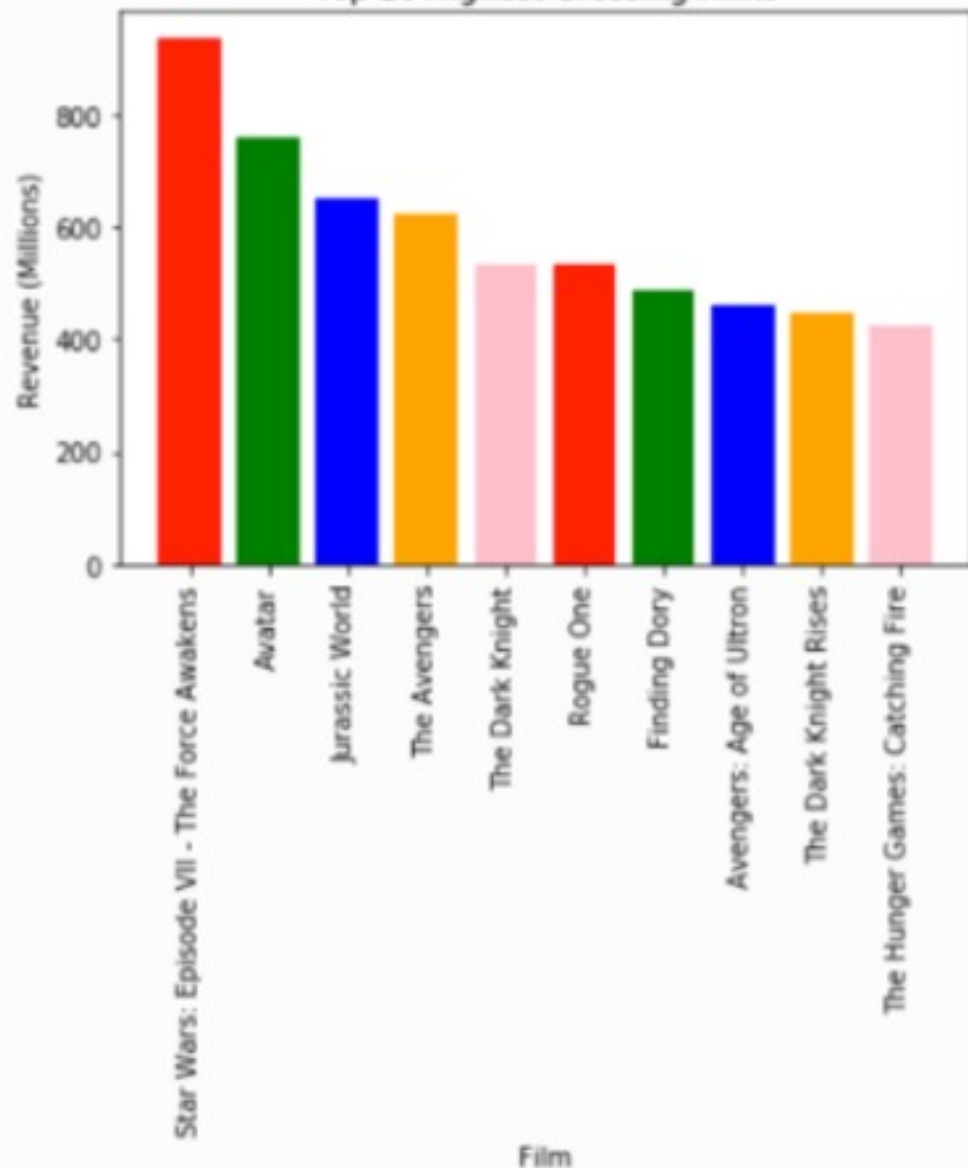




Disney gross
per year



Top 10 Highest Grossing Films



Disney title
gross



During Covid-19 – (2020 – 2021)

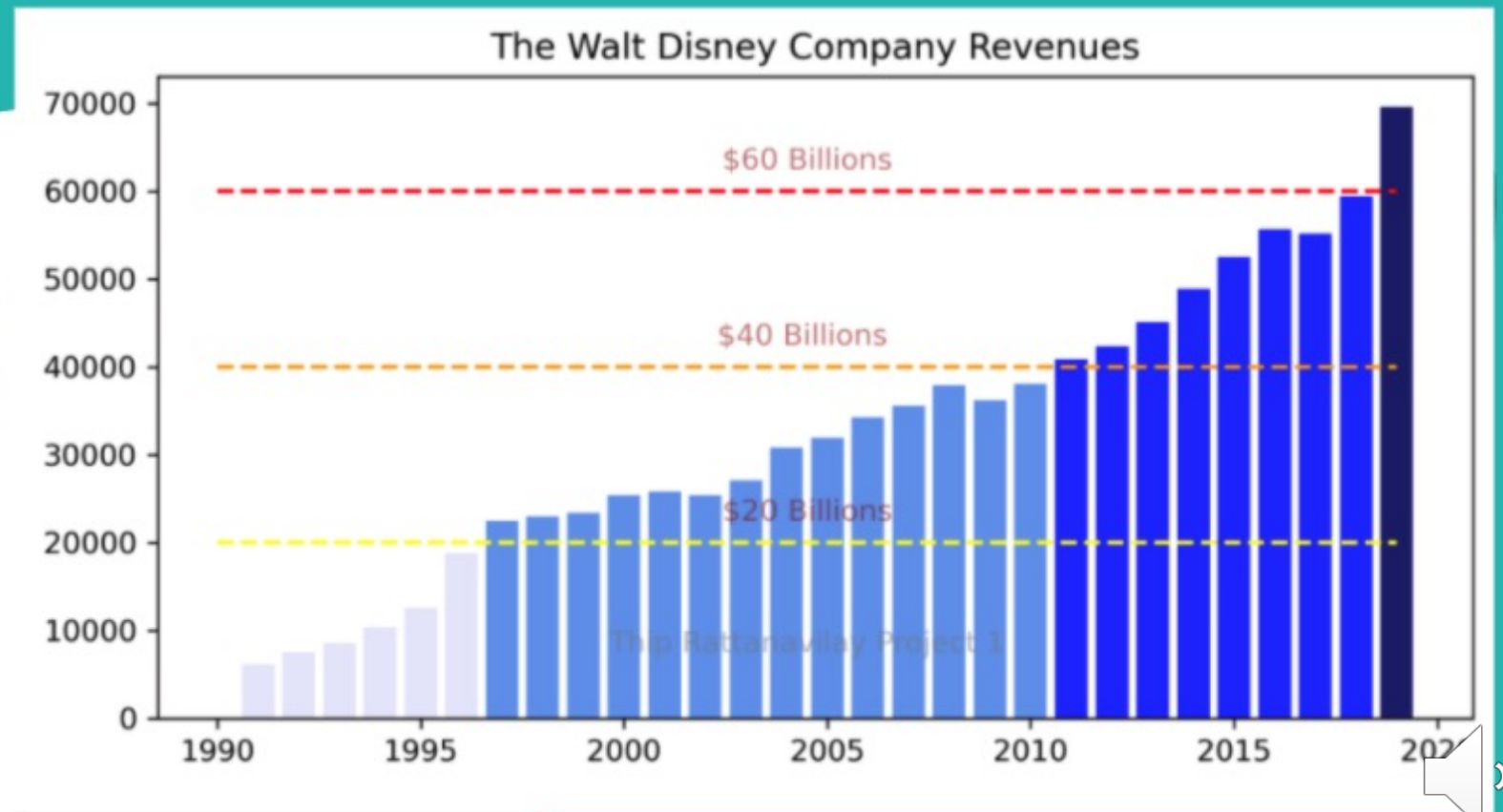
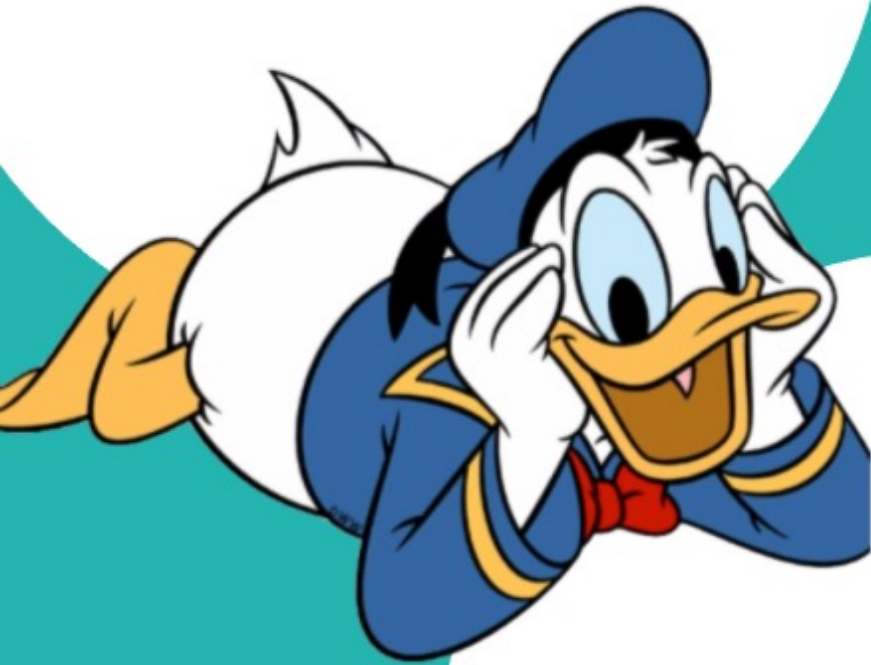
Disney Plus Gross

Disney Plus revenue

Year	Revenue
Q1 2020	\$0.5 billion
Q2 2020	\$0.9 billion
Q3 2020	\$1.4 billion
Q4 2020	\$1.7 billion
Q1 2021	\$2 billion



Disney Overall Profit



Conclusion

- Disney continues to add more to their studio like Pixar, Marvel Universe, and Star wars.
- Top genre were Action, Comedy, Documentary and Musical.
- Top movie of all time is Snow White and the seven dwarf and later Star wars and Marvels Universe.
- Before Covid Disney was profiting in the upper \$70 billions.
- During Covid Box office dropped near 95% but streaming service gain new custom in upper the 80% at \$5 billions in profit growth.
- Random Forest show the best train and testing for gross prediction



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