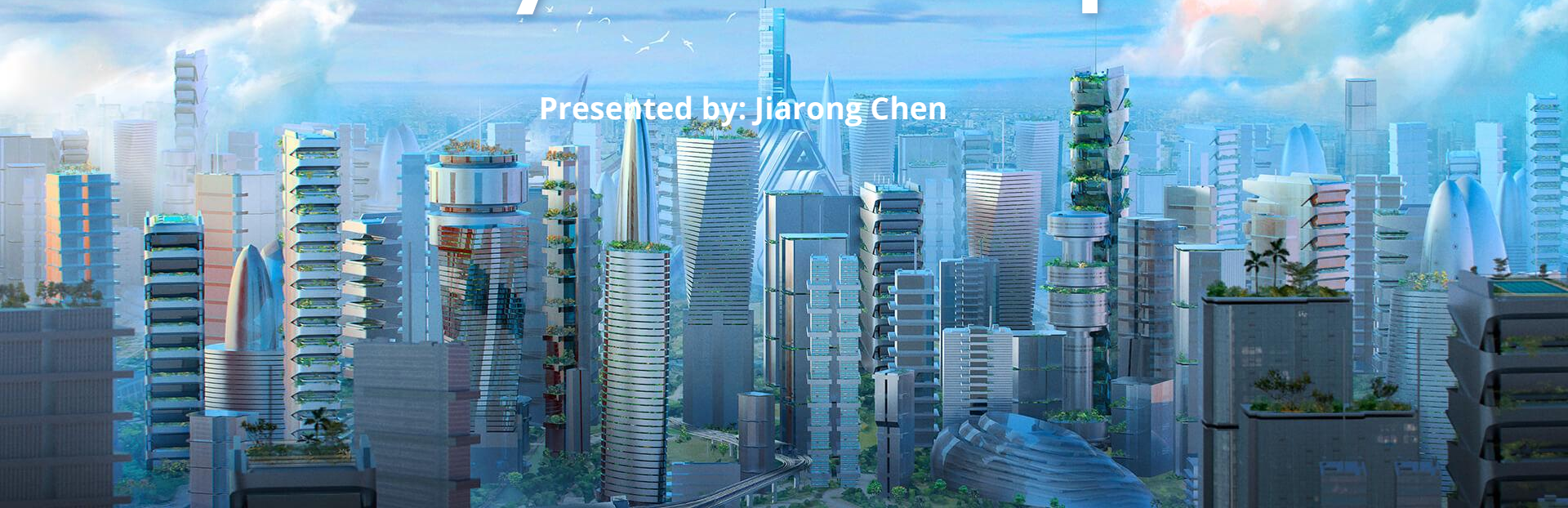


Movie Market Analysis and Report

Presented by: Jiarong Chen



Background

Business problem

Microsoft sees all the big companies creating original video content, and they want to get in on the fun. They have decided to create a new movie studio, but the problem is they don't know anything about creating movies. They have hired you to help them **better understand the movie industry**. Your team is charged with exploring **what type of films are currently doing the best at the box office**. You must then translate those findings into actionable insights that the head of Microsoft's new movie studio can use to help decide what type of films to create

My questions and plan

1. Best Genre

- A best genre in Highest Mean Rating
- A best genre in Highest Total Gross
- Comparing and Summary

2. Budget vs Total Grosses

- Are budgets and total grosses connected?
- Which genre has the strongest relationship?
- Which genre has the highest revenue?

3. Best Runtime

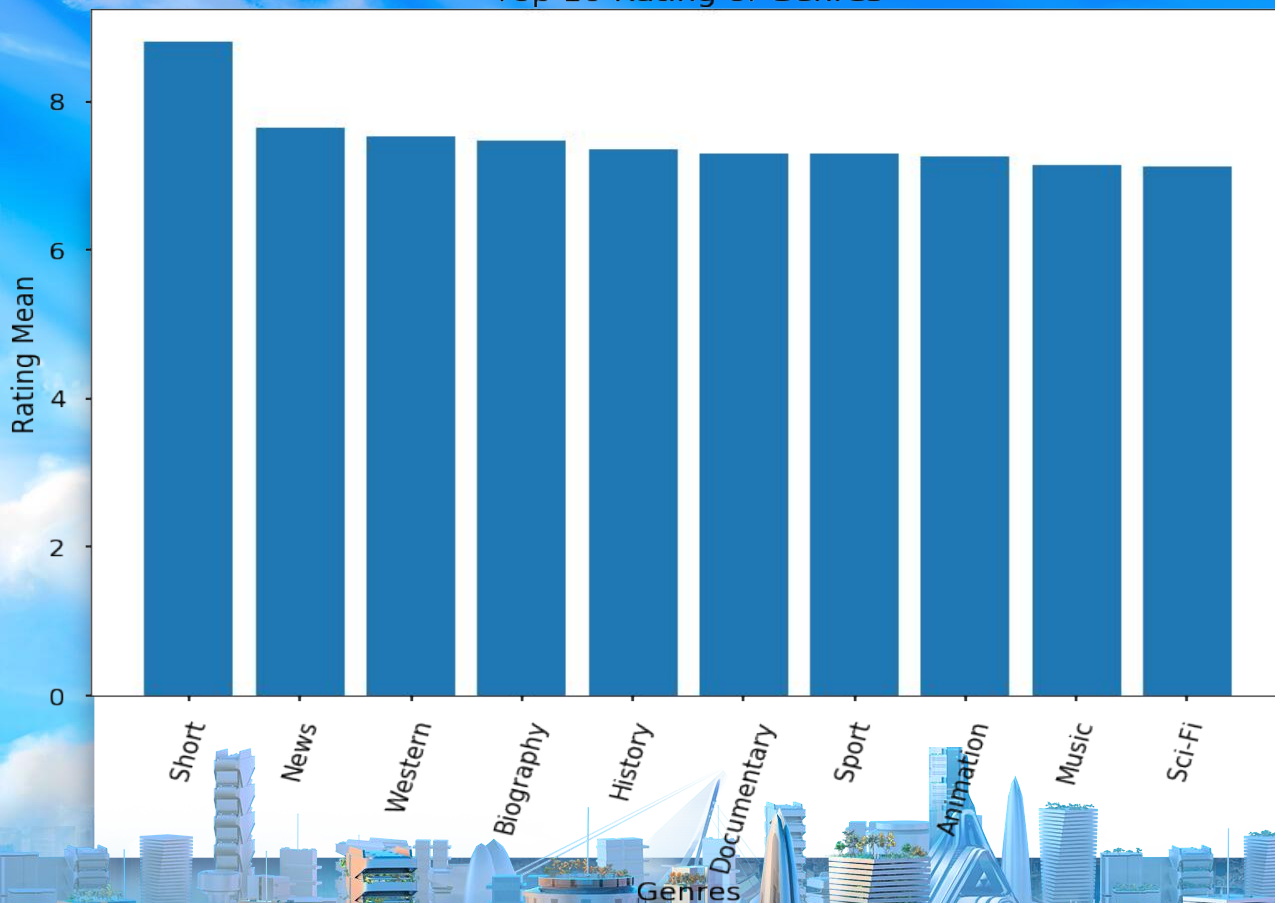
- Find the most runtime range from top rating
- Find the most runtime range from top revenue
- Comparing and Summary



1. Best Genre

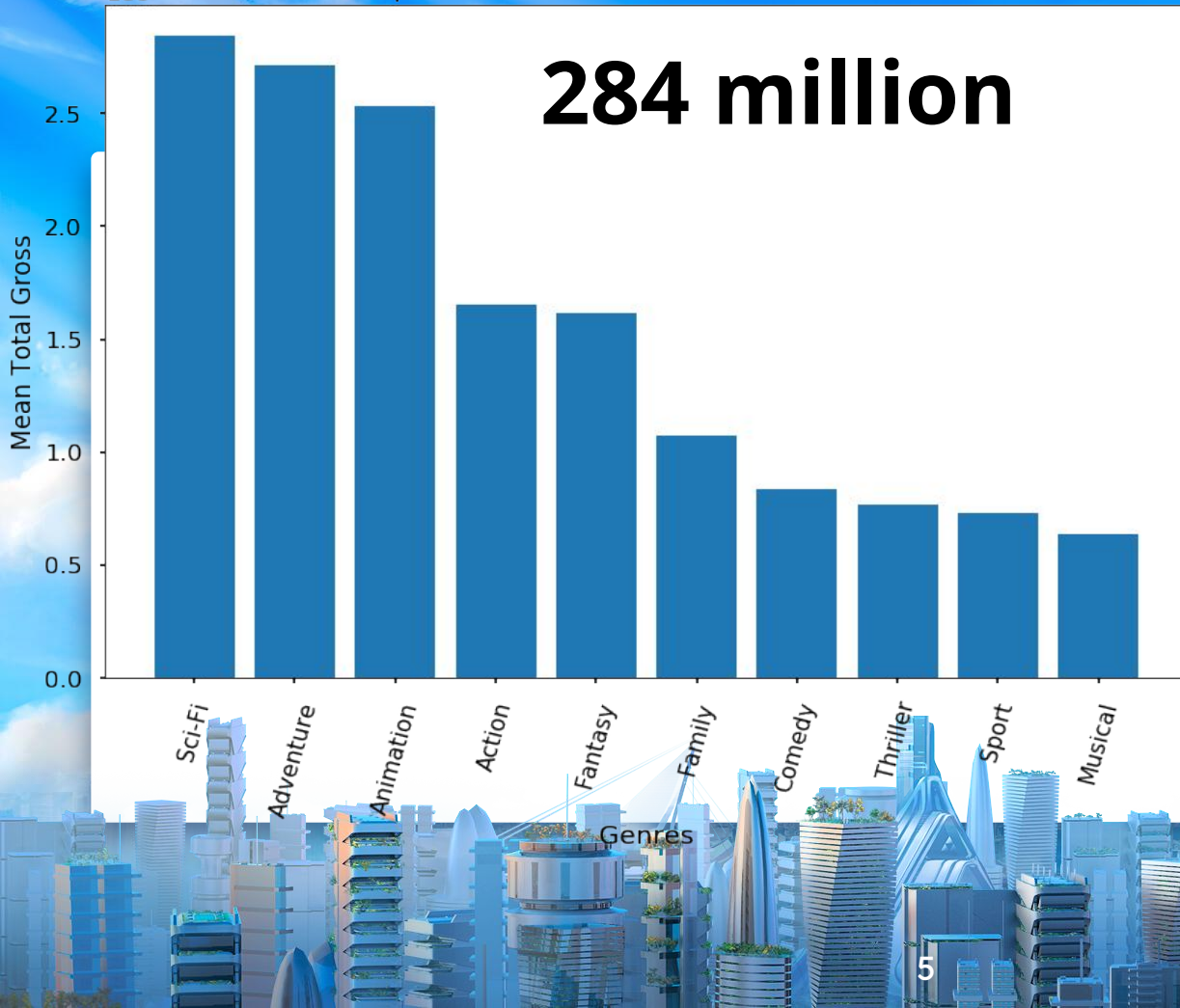
- a. Highest Rating
- b. Highest Gross
- c. Comparing and Summary

Top 10 Rating of Genres

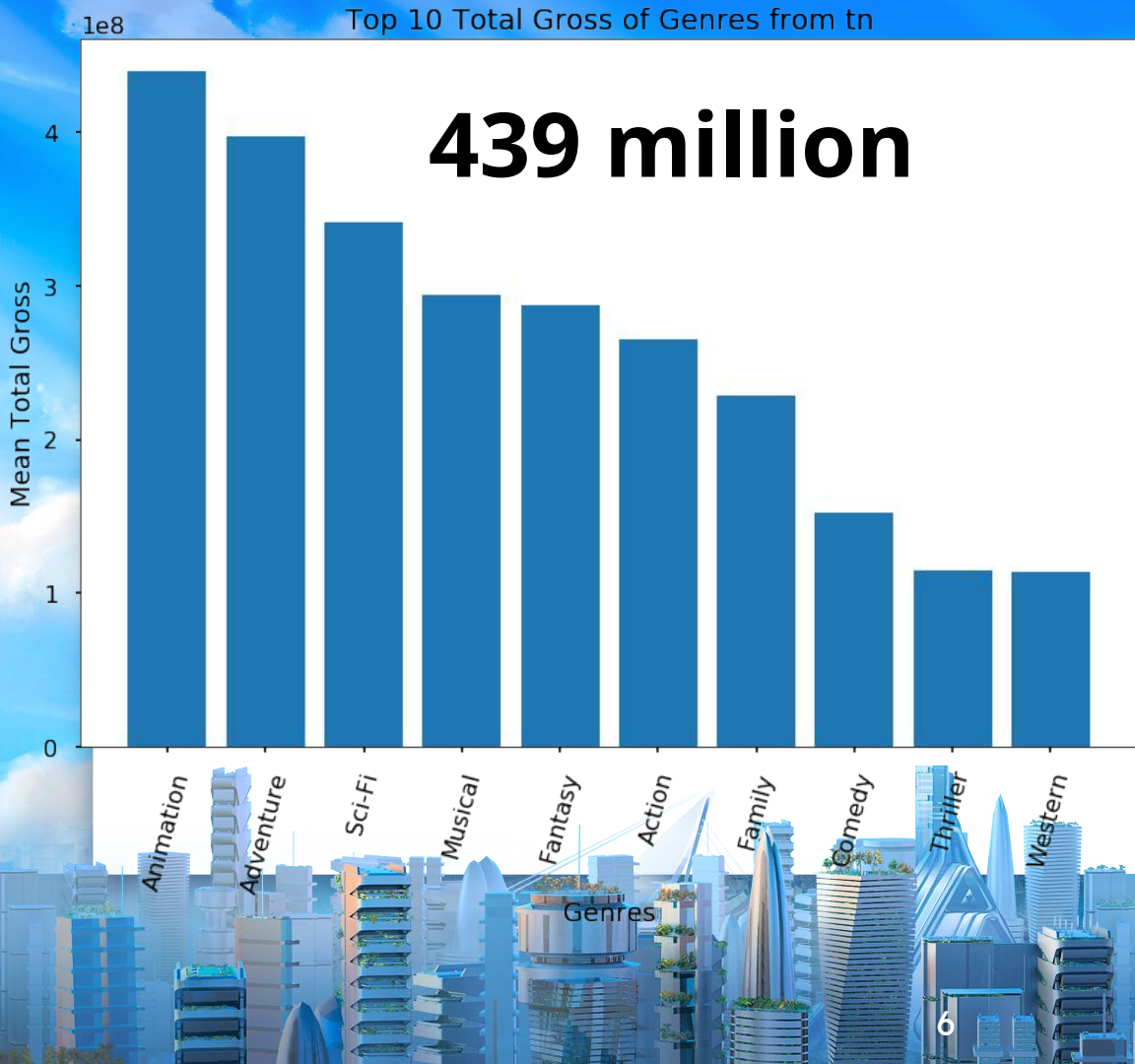


	genres	mean_rating
21	Short	8.800000
17	News	7.640460
25	Western	7.519219
4	Biography	7.475118
12	History	7.358504
7	Documentary	7.298120
22	Sport	7.291363
3	Animation	7.265119
14	Music	7.131506
20	Sci-Fi	7.120721

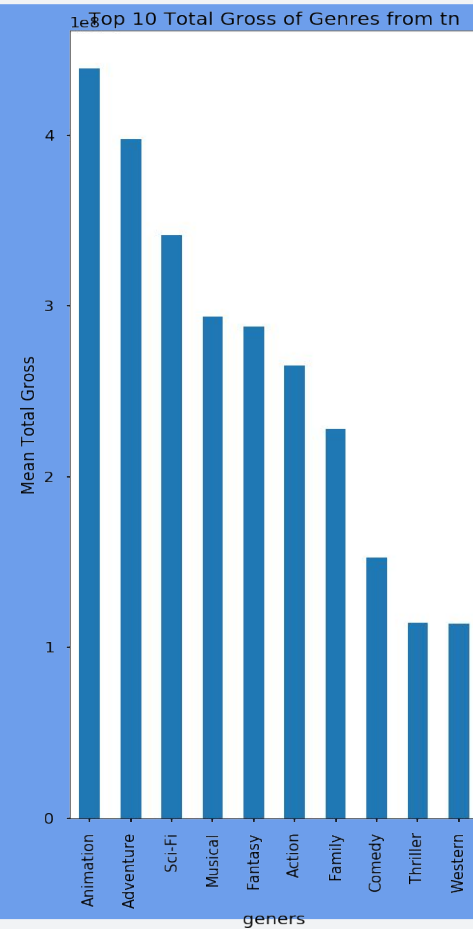
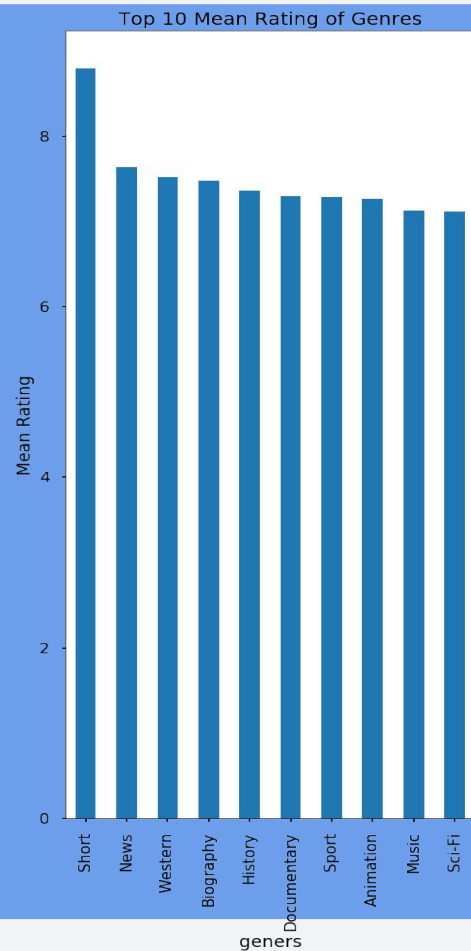
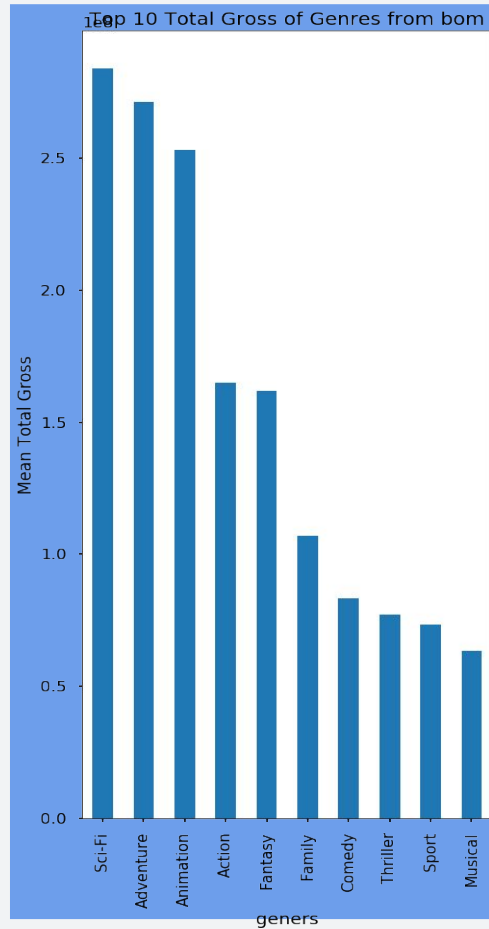
Top 10 Total Gross of Genres from bom



	genres	mean_totgross
17	Sci-Fi	2.841010e+08
1	Adventure	2.712715e+08
2	Animation	2.531046e+08
0	Action	1.650091e+08
9	Fantasy	1.617202e+08
8	Family	1.070016e+08
4	Comedy	8.340298e+07
19	Thriller	7.703152e+07
18	Sport	7.327638e+07
13	Musical	6.345121e+07



	genres	mean_totgross
2	Animation	4.394062e+08
1	Adventure	3.976234e+08
17	Sci-Fi	3.416897e+08
13	Musical	2.940105e+08
9	Fantasy	2.879725e+08
0	Action	2.650756e+08
8	Family	2.281968e+08
4	Comedy	1.524296e+08
19	Thriller	1.146679e+08
21	Western	1.140367e+08



Summary

Best Genres: Science Fiction and Animation

Science Fiction:

Rating: 7.120721

Total Gross from Bom: 284 million dollars

Total Gross from NT: 342 million dollars

Animation:

Rating: 7.265119

Total Gross from Bom: 253 million dollars

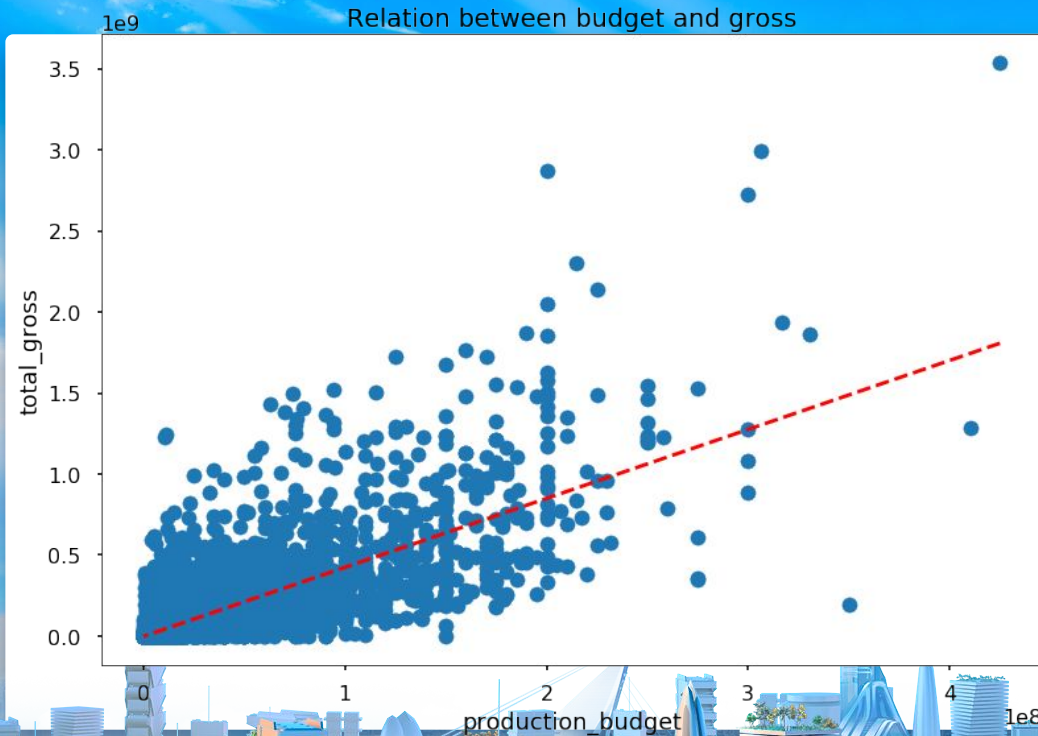
Total Gross from NT: 439 million dollars

2.

Budget vs Total Gross

- a. Are budgets and total gross connected?
- b. Which genre has the strongest relationship?
- c. Which genre has the highest revenue?

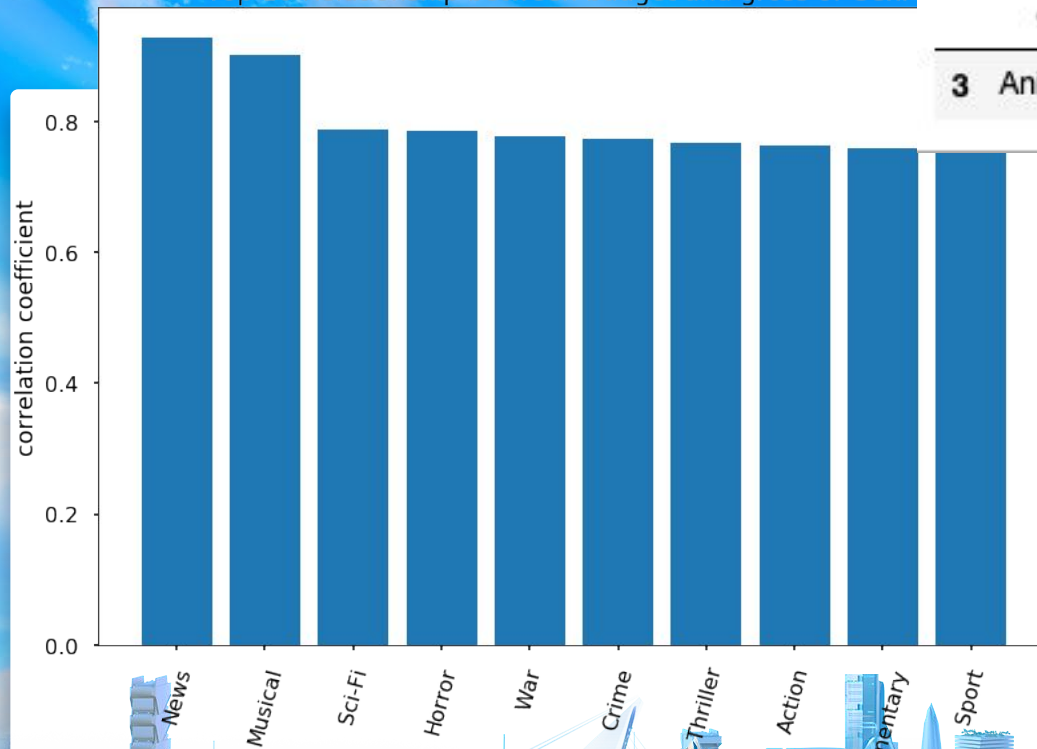




**correlation coefficient:
0.74196702**



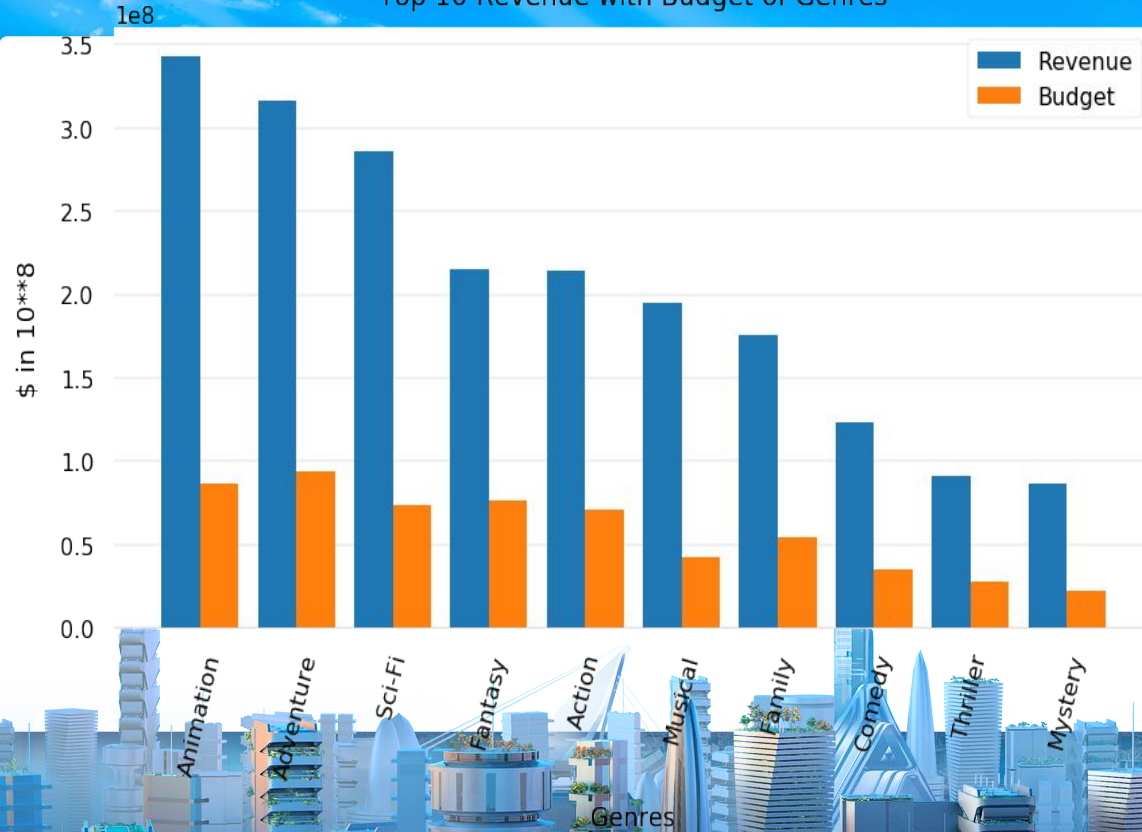
Top 10 Relationship between budget and gross of Genre



genres	corr
3 Animation	0.692486

	genres	corr
	News	0.928002
15	Musical	0.901655
20	Sci-Fi	0.786880
13	Horror	0.785489
25	War	0.777547
6	Crime	0.773461
24	Thriller	0.767988
0	Action	0.762663
7	Documentary	0.759246
22	Sport	0.755763

Top 10 Revenue with Budget of Genres



	geners	revenue	budget
2	Animation	3.429938e+08	8.653679e+07
1	Adventure	3.163703e+08	9.395289e+07
17	Sci-Fi	2.857869e+08	7.390868e+07
9	Fantasy	2.153605e+08	7.650267e+07
0	Action	2.140184e+08	7.047052e+07
13	Musical	1.953371e+08	4.279333e+07
8	Family	1.761249e+08	5.398112e+07
4	Comedy	1.231741e+08	3.497973e+07
19	Thriller	9.073795e+07	2.775505e+07
14	Mystery	8.613043e+07	2.188758e+07



TOP 10 Out of Pocket Movie

157 millions

	original_title	start_year	runtime_minutes	release_date	production_budget	domestic_gross	worldwide_gross	total_gross	count	revenue
tconst										
tt6565702	Dark Phoenix	2019	113.0	2019	350000000.0	42762350.0	149762350.0	192524700.0	1	-157475300.0
tt2283336	Men in Black: International	2019	115.0	2019	110000000.0	3100000.0	3100000.0	6200000.0	1	-103800000.0
tt5519340	Bright	2017	117.0	2017	90000000.0	0.0	0.0	0.0	1	-90000000.0
tt1305591	Mars Needs Moms	2011	88.0	2011	150000000.0	21392758.0	39549758.0	60942516.0	1	-89057484.0
tt7232438	Puen Tee Raluek	2017	114.0	2017	90000000.0	8224288.0	10551417.0	18775705.0	1	-71224295.0
tt4776998	The Promise	2016	133.0	2017	90000000.0	8224288.0	10551417.0	18775705.0	1	-71224295.0
tt1041804	The Nutcracker in 3D	2010	110.0	2010	90000000.0	195459.0	20466016.0	20661475.0	1	-69338525.0
tt4743226	Da hong zha	2018	120.0	2018	65000000.0	0.0	516279.0	516279.0	1	-64483721.0
tt2479478	The Ridiculous 6	2015	119.0	2015	60000000.0	0.0	0.0	0.0	1	-60000000.0
tt2428672	Midway	2013	85.0	2019	59500000.0	0.0	0.0	0.0	1	-59500000.0

Summary

Strong Relationship: 0.74196702

Science Fiction:

Correlation Coefficient: 0.78688

Revenue: 286 million dollars

Budget: 74 million dollars

Animation:

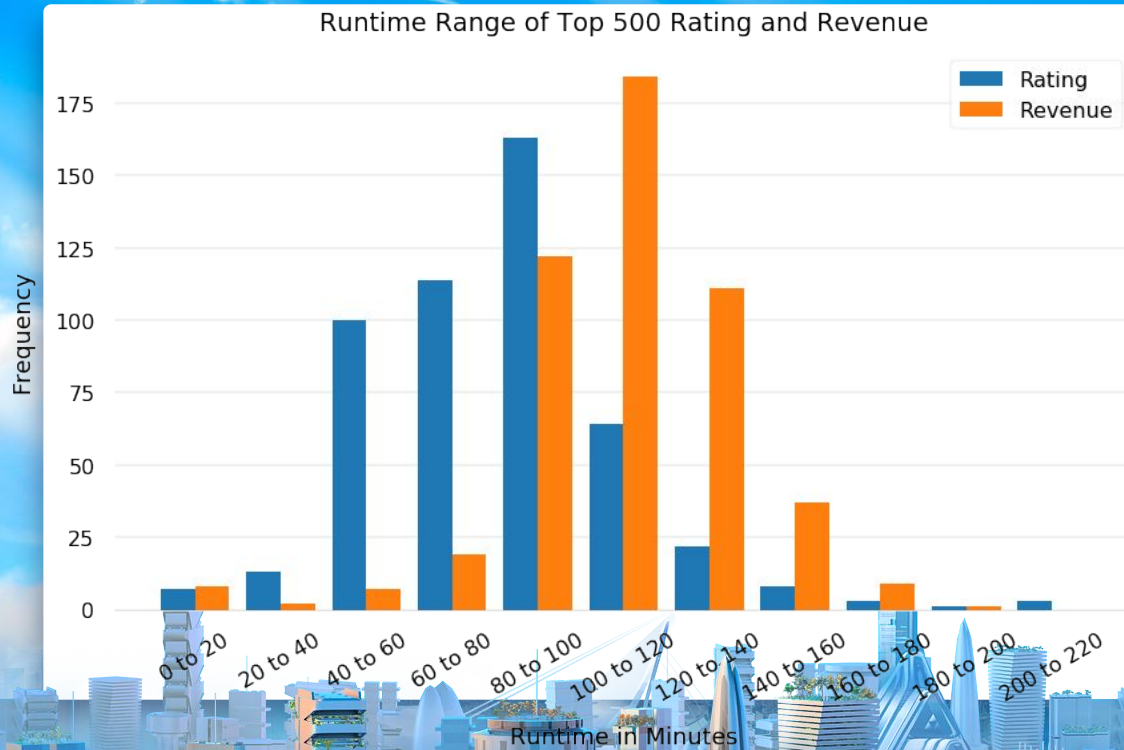
Correlation Coefficient: 0.692486

Revenue: 343 million dollars

Budget: 86 million dollars

3. Best Runtime

- a. The most runtime range from top rating movies
- b. The most runtime range from top revenue movies
- c. Comparing and Summary



	runtime_range	rating	revenue
0	0 to 20	7	8
1	20 to 40	13	2
2	40 to 60	100	7
3	60 to 80	114	19
4	80 to 100	163	122
5	100 to 120	64	184
6	120 to 140	22	111
7	140 to 160	8	37
8	160 to 180	3	9
9	180 to 200	1	1
10	200 to 220	3	0

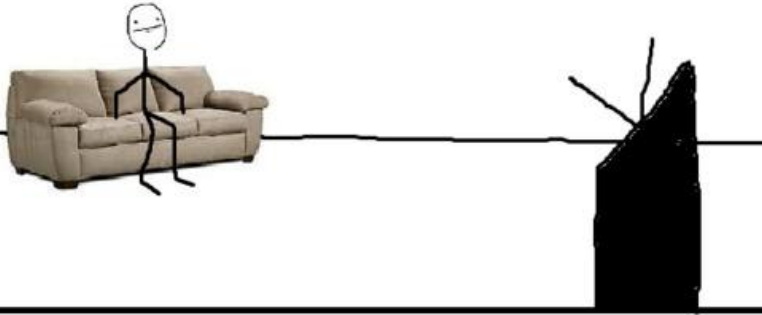
Summary

80-100 mins:

rating: 163

Revenue: 122

When watching funny movie alone



100-120 mins:

rating: 64

Revenue: 184

When watching funny movie with family



Recommendation

Genres

Conservative:

Genre: Science Fiction
Budget: 74 million dollars
Revenue: 286 million dollars



Radical:

Genre: Animation
Budget: 86 million dollars
Revenue: 343 million dollars

Runtime

Prefer Rating:
80-100 mins

Prefer Revenue:
100-120 mins



Congratulation!

You will make a good movie successfully!





Thank you!

Any questions?

You can find me at:

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<https://github.com/JRRRRRRR>