

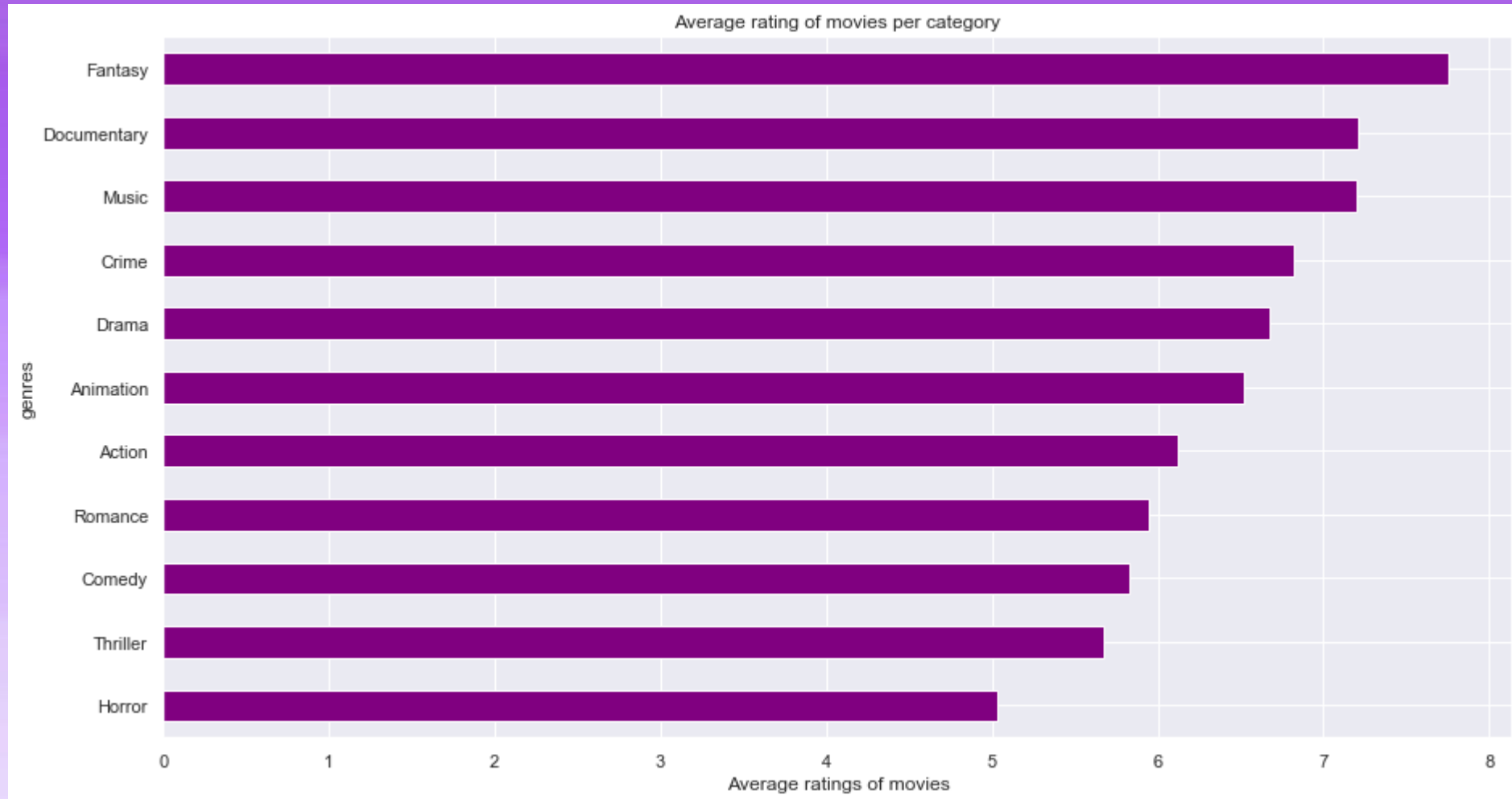
Movie Industry



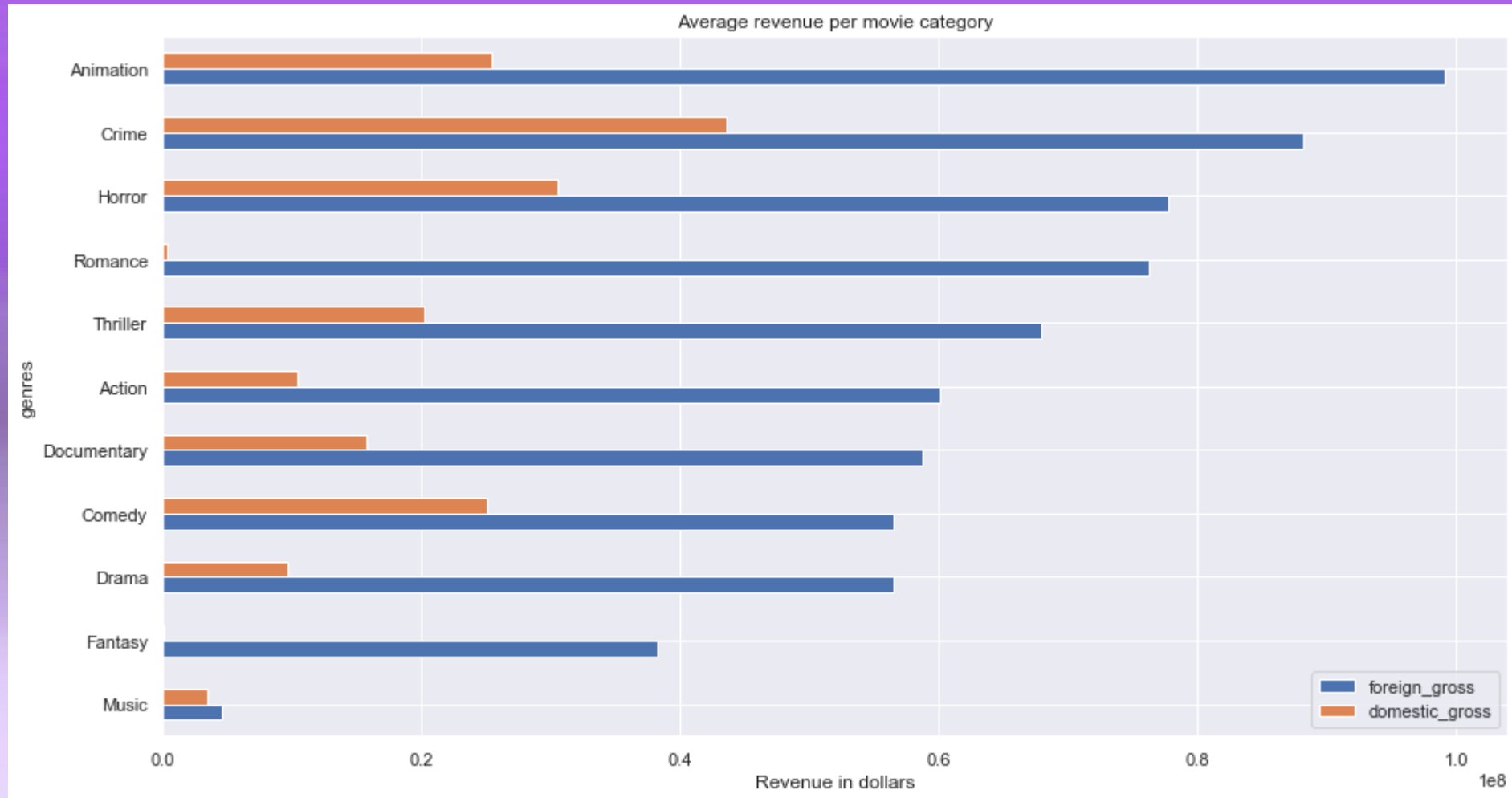
Business problem

- What are the movie categories in the market?
- Which movie categories people are interested in and have ratings?
- Which movie categories are most profitable for investment?

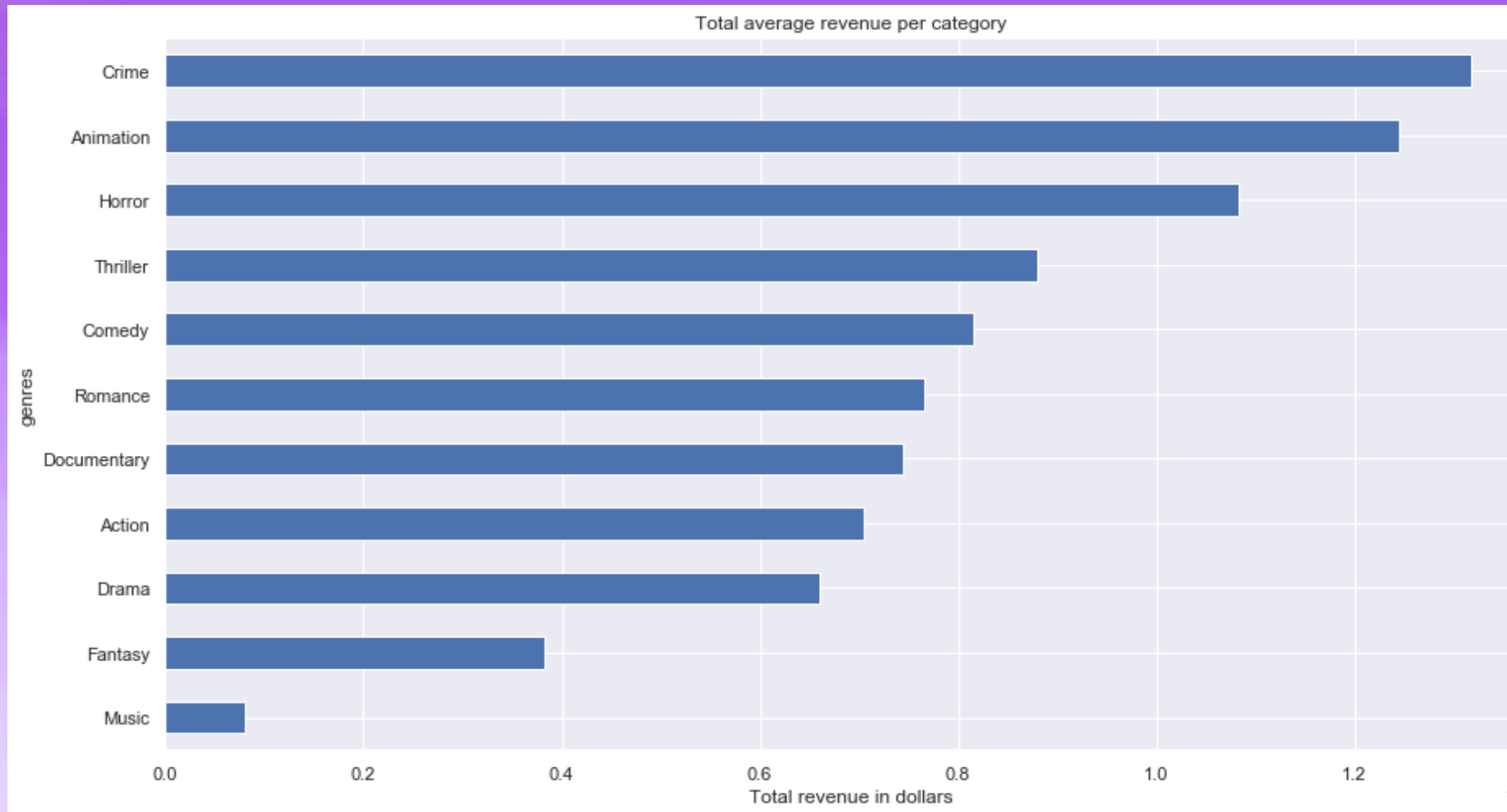
Average rating per movie category



Average revenue per movie category



Average total revenue per movie category



Correlation factor

- Correlation factor between average rating of movies and national revenue : -0.09
- Correlation factor between average rating of movies and international revenue: 0.017
- Correlation factor between average rating of movies and total revenue : -0.02

Regression model

Linear regression model for total revenue and movie categories

	coef	std err	t	P> t	[0.025	0.975]
Intercept	7.041e+07	1.66e+07	4.236	0.000	3.78e+07	1.03e+08
genres[T.Animation]	5.404e+07	3.56e+07	1.516	0.130	-1.6e+07	1.24e+08
genres[T.Comedy]	1.11e+07	1.81e+07	0.612	0.541	-2.45e+07	4.67e+07
genres[T.Crime]	6.132e+07	3.9e+07	1.573	0.116	-1.52e+07	1.38e+08
genres[T.Documentary]	3.973e+06	1.8e+07	0.221	0.825	-3.13e+07	3.92e+07
genres[T.Drama]	-4.352e+06	1.71e+07	-0.255	0.799	-3.79e+07	2.92e+07
genres[T.Fantasy]	-3.208e+07	5.26e+07	-0.610	0.542	-1.35e+08	7.11e+07
genres[T.Horror]	3.786e+07	2.1e+07	1.801	0.072	-3.42e+06	7.92e+07
genres[T.Music]	-6.241e+07	7.24e+07	-0.861	0.389	-2.05e+08	7.99e+07
genres[T.Romance]	6.182e+06	3.32e+07	0.186	0.853	-5.91e+07	7.15e+07
genres[T.Thriller]	1.762e+07	2.18e+07	0.809	0.419	-2.52e+07	6.04e+07
Omnibus:	525.949	Durbin-Watson:	1.937			
Prob(Omnibus):	0.000	Jarque-Bera (JB):	16421.442			
Skew:	3.690	Prob(JB):	0.00			
Kurtosis:	27.345	Cond. No.	30.7			

Regression model

Multiple linear regression for movie ratings , national and international revenues.

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              coef      std err          t      P>|t|      [0.025      0.975]
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Intercept          6.4790         0.069      94.462      0.000         6.344         6.614
domestic_gross -4.064e-09      1.53e-09      -2.649      0.008     -7.08e-09     -1.05e-09
foreign_gross   1.366e-09      9.46e-10       1.444      0.149     -4.92e-10      3.23e-09
=====
Omnibus:                95.052   Durbin-Watson:                1.428
Prob(Omnibus):           0.000   Jarque-Bera (JB):           167.940
Skew:                    -0.940   Prob(JB):                   3.41e-37
Kurtosis:                4.756   Cond. No.                   1.23e+08
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Linear regression for movie ratings and total revenues

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              coef      std err          t      P>|t|      [0.025      0.975]
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Intercept          6.5324         0.066     99.390      0.000         6.403         6.661
totalrevenue -4.456e-10      6.41e-10     -0.695      0.488     -1.71e-09      8.14e-10
=====
Omnibus:                98.321   Durbin-Watson:                1.422
Prob(Omnibus):           0.000   Jarque-Bera (JB):           175.068
Skew:                    -0.965   Prob(JB):                   9.65e-39
Kurtosis:                4.781   Cond. No.                   1.48e+08
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Conclusion

- The first 3 movie categories with the most revenues as calculated by total revenues are: Crime, Animation, Horror.
- Movie categories with highest average ratings: Fantasy, Documentary and Music.
- Negative correlation factor between ratings of moves and total revenues.
- Microsoft can start movie business producing movies in the following categories: Crime, Animation and Horror