Shark Tank TV Series

Hypothesis:

My hypothesis is you are more likely to get a deal if you are a male and you have a food or beverage company and accept a deal from Mark Cuban.

ANALYSIS OF DATA IN R AND PYTHON PANDAS

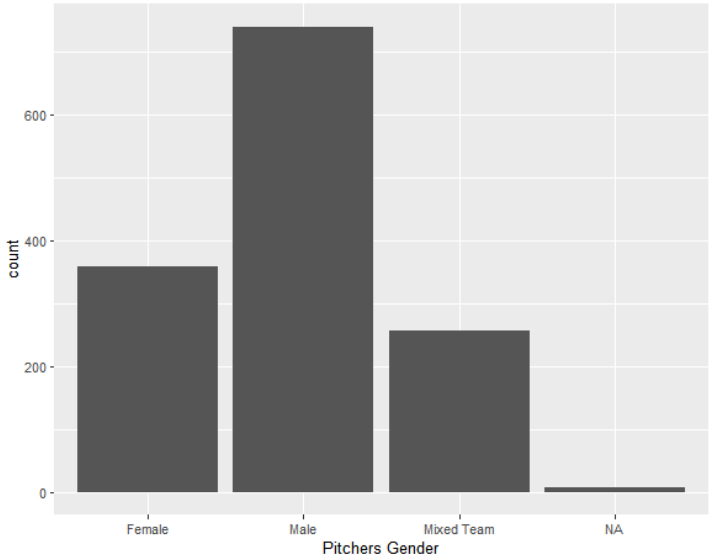
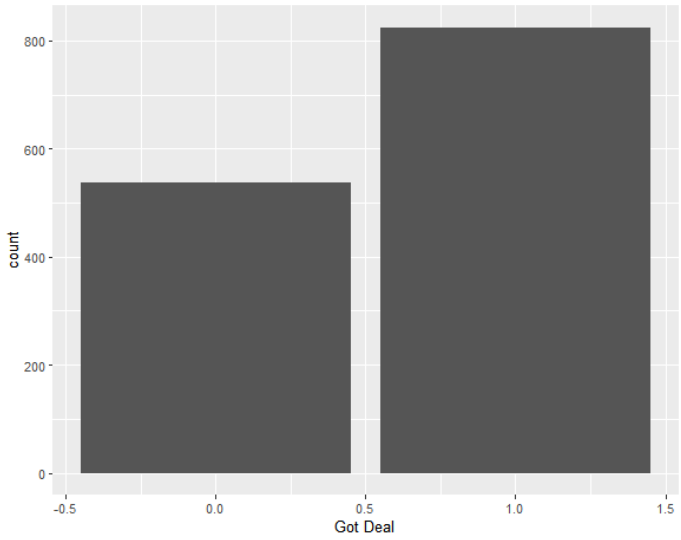


Table created in R showing the data on the genders that presented. NA means data was not found on if they were a boy or girl. So nevermind that piece. You can clearly see that it is mainly males that appear on the show, giving my hypothesis validity already, but let's continue to analyze the data.

This graph was drawn in R and the left shows the amount of deals that did not get an offer from the sharks or they got an offer and declined. The right shows the amount of pitches that got an offer.



I found some really interesting and helpful statistics to go over. As all graphs to this point are from R, I will share my findings from that platform first.

Shark Tank Investor Presence

1. Kevin O Leary (945)
2. Mark Cuban (900)
3. Robert Herjavec (824)
4. Lori Greiner (764)
5. Daymond John (634)
6. Barbara Corcoran (551)

This piece of data confirms that anyone would be more likely to strike a deal with Mark male or female due to the fact he is just on the show more.

Shark Tank Deals Made Top to Bottom

1. Mark Cuban (249)
2. Lori Greiner (217)
3. Barbara Corcoran (130)
4. Robert Herjavec (127)
5. Kevin O Leary (127)
6. Daymond John (117)

From the data above we learn once again it is more likely for anyone to get a deal with Mark Cuban just because he has made more business deals than any other Shark.

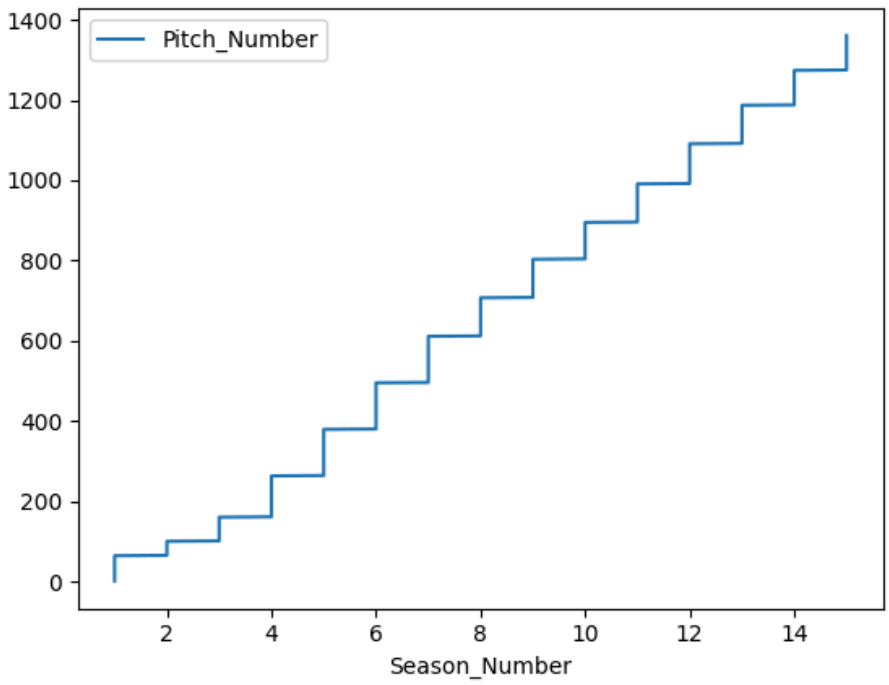
Likelihood of Deal Based on Equity Agreement

- 168 Deals were made at 10% equity or less
- 266 Deals made at or above 11% and less than or equal to 20%
- 209 Deals made at or above 21% and less than or equal to 30%
- 181 Deals were made at over 30%

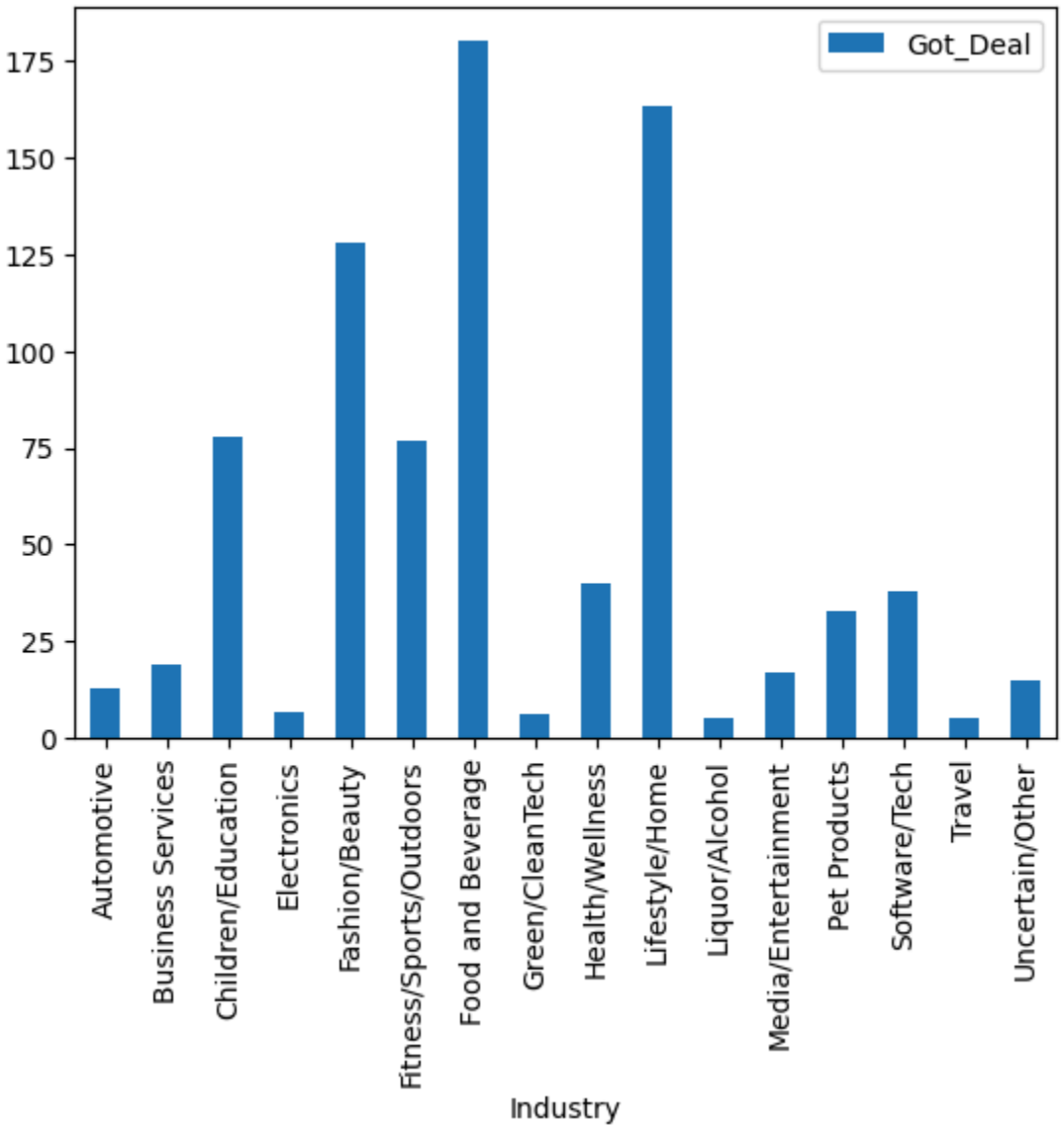
Most deals are made at under 30% but there is a good amount over that mark. This data is helpful in the meeting of the minds for both business owners and Sharks.

Industry	Original_Offered_Equity	Total_Deal_Equity
Travel	18.181818	32.600000
Electronics	16.875000	20.000000
Fashion/Beauty	14.804889	26.138281
Green/CleanTech	14.454545	22.000000
Fitness/Sports/Outdoors	14.372000	24.866234
Pet Products	14.350877	22.154545
Children/Education	13.774797	25.092308
Media/Entertainment	13.615385	26.341176
Food and Beverage	13.274576	22.704444
Lifestyle/Home	13.172764	23.685460
Uncertain/Other	12.260870	26.666667
Health/Wellness	12.044776	19.501250
Business Services	11.532500	18.684211
Automotive	11.441176	32.815385
Software/Tech	10.920290	19.934211
Liquor/Alcohol	7.810000	23.540000

Now I will switch between R and Pandas in Python. You can see the average equity offered by each business owner across all industries and on the right you can see what it then goes up to upon agreement with Shark. No wonder they are called Sharks.



This chart above shows the total number of pitches over the 15 seasons of Shark Tank that I have analyzed. Now that we have some extremely helpful data we are going to more fully jump in to what Mark Cuban has done so far in these first 15 years.



The food and beverage industry has had the most pitches. Further proving the likelihood of a f&b company getting a deal with Mark Cuban. Simply because there have been more.

Below you can see how many deals Mark makes per season.

Season_Number	Mark_Cuban_Investment_Equity
1	1
2	4
3	15
4	18
5	21
6	19
7	22
8	12
9	23
10	19
11	18
12	23
13	16
14	19
15	19

This is a really fun piece of data to look over. 20 would probably be a good median for how many companies Mark invests in over the years. This next image will be even more helpful.

Industry	Pitch_Number	Mark_Cuban_Investment_Equity
Automotive	17	4
Business Services	40	8
Children/Education	123	18
Electronics	16	2
Fashion/Beauty	225	36
Fitness/Sports/Outdoors	125	24
Food and Beverage	295	61
Green/CleanTech	11	4
Health/Wellness	67	12
Lifestyle/Home	246	40
Liquor/Alcohol	10	3
Media/Entertainment	26	7
Pet Products	57	5
Software/Tech	69	18
Travel	11	1
Uncertain/Other	23	6

The table above shows us the industries of Shark tank and how many companies Mark has invested in over the various industries giving further credibility to the hypothesis at the beginning stating that Mark is likely to invest in the f&b Industry.

Final Conclusion

To close I have a couple more pieces of data. This was found in R. In the food and beverage category Mark invested in 34/144 (23%) male companies, 14/85 (16%) female companies, 12/64 (18%) mix of male and female teams. Thus proving through all numbers and analysis that Mark is more likely to make a deal with a male and to do so in the Food & Beverage industry. But wait there is more, outside of the Food and Beverage industry 63/358 female companies have been invested in by mark and 139/739 male companies have been invested in. The percentage difference is only about 1% and that higher percentage goes to the males, helping us understand that Mark was almost 50/50 in investing in female and male owned companies based off of percentage and ratio. But as for the F&B category the amount of male owners he has invested in has been greater.