Shark Tank SQL Insights

BAX-421 Data Management
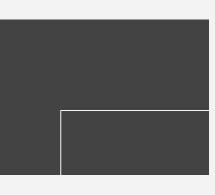
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1. Dataset Overview

Dataset Overview

- This dataset contains data about the American business reality show Shark Tank.
  - Covers:
    - Seasons 1-14
    - 48 columns
    - 1260+ rows
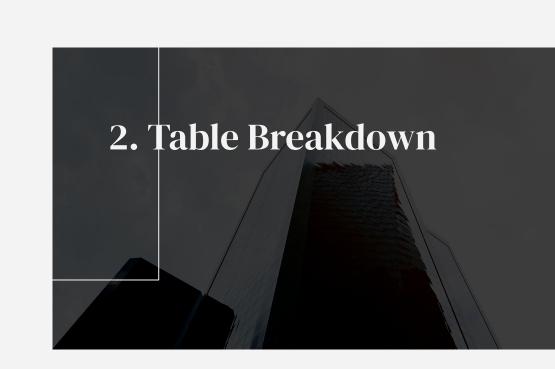- The dataset was retrieved from Kaggle.
- 1 data file

2. Table Breakdown

Table Breakdown

- This dataset was manually broken down into 10 tables

  - Episode

  - Startup

  - Entrepreneur

  - Deal

  - Each of the 6 Sharks:

    - Barbara Corcoran, Mark Cuban, Lori Greiner, Robert Herjavec, Daymond John, Kevin O Leary
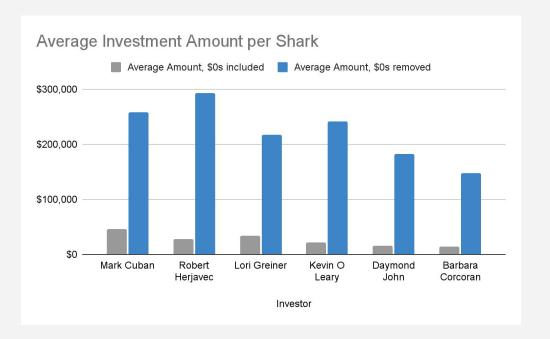
3. Business Questions and Insights

01

Average Investment per Shark

1. What is the average investment amount of each Shark?

Investor	Average Amount, $0s included	Average Amount, $0s removed
Mark Cuban	$46644	$258367
Robert Herjavec	$27784	$292540
Lori Greiner	$33943	$217303
Kevin O Leary	$22109	$240748
Daymond John	$15895	$182431
Barbara Corcoran	$13905	$147625

- Mark Cuban and Robert Herjavec are the highest investors on average, both with and without $0s taken into consideration.

1. What is the average investment amount of each Shark?

Average Investment Amount per Shark

- The $0's make a significant difference in lowering the average investment amount, which is logical as not every investor will invest in every startup.
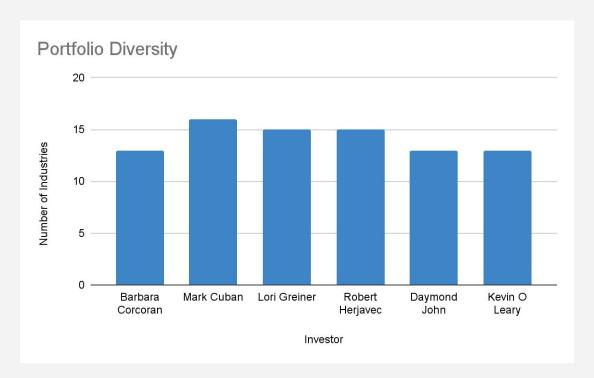
Shark Portfolio Diversity

02

2. How diverse is each Shark's investment portfolio?

- Analyzed number of industries each Shark invested in

- Analyzed each Shark's top industry and how many startups they invested in for their top industry

Investor	Top Industry	Top Industry Startup Count	Count of Industries
Mark Cuban	Food and Beverage	59	16
Robert Herjavec	Fashion / Beauty	21	15
Lori Greiner	Lifestyle / Home	57	15
Kevin O Leary	Lifestyle / Home	33	13
Daymond John	Fashion / Beauty	31	13
Barbara Corcoran	Food and Beverage	36	13

2. How diverse is each Shark's investment portfolio?

- Mark Cuban has the most diverse portfolio, investing in 16 industries.

- Overall, all the Sharks have a relatively diverse portfolio, with the minimum being 13 industries.

Portfolio Diversity
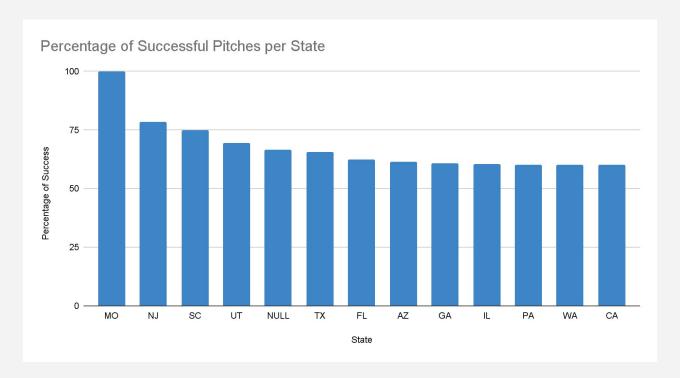
03

Geographical Analysis

3. Which states are the most successful in receiving deals?

- Only states with more than 3 pitches made were analyzed to get a better measure of overall success.

- These results may be skewed due to missing data.

State	Count Success	Percentage of Success
Missouri	6	100%
New Jersey	11	79%
South Carolina	3	75%
Utah	16	70%
Texas	36	65%
Florida	30	63%
Arizona	8	62%

3. Which states are the most successful in receiving deals?

- The states with the highest percentages of successful pitches were: Missouri, New Jersey, and South Carolina.

Percentage of Successful Pitches per State
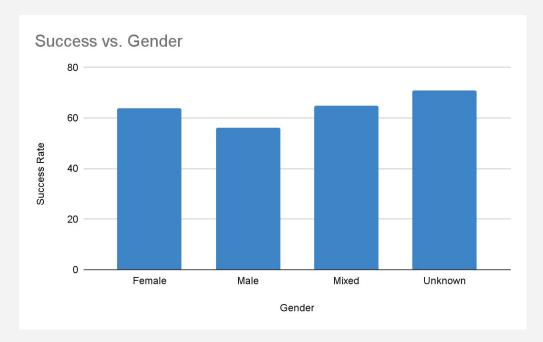
Gender
Analysis

04

4. Does gender have an impact on pitch success?

- Overall, mixed gender teams appear to have a higher success rate than single gender teams.

- Female entrepreneurs have a 8% higher success rate than male entrepreneurs.

- These results may be skewed due to missing data (unknown gender).

Gender	Percentage of Success
Female	64%
Male	56%
Mixed Gender	65%
Unknown	71%

Success vs. Gender
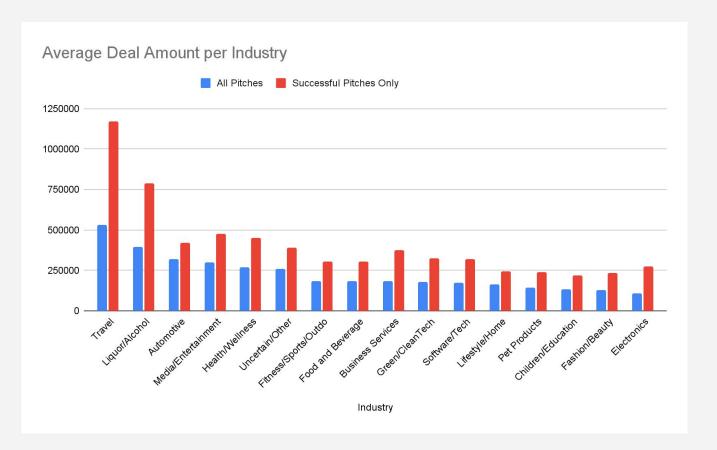
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Industry
Analysis

5. Which industries produce the highest average deal amounts?

- The top 5 industries with the highest average total deal amounts are: travel, liquor, automotive, media, and health.

- This list remains the same when taking the highest average total deal amounts of only the successful pitches, but the order of the top 5 shifts.

Industry	Average Deal Amount, All Pitches
Travel	$531818
Liquor / Alcohol	$393750
Automotive	$321471
Media / Entertainment	$297917
Health / Wellness	$271769

Industry	Average Deal Amount, Successful Pitches Only
Travel	$1170000
Liquor/Alcohol	$787500
Media/Entertainment	$476667
Health/Wellness	$452949
Automotive	$420385

5. Which industries produce the highest average deal amounts?

Average Deal Amount per Industry
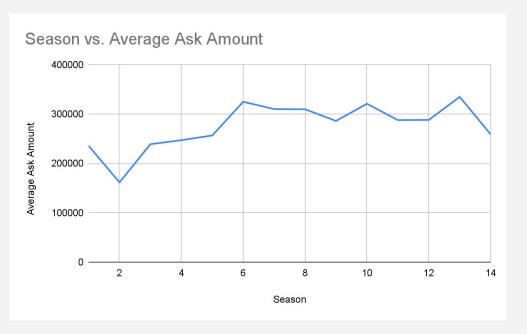
Trend over Time - Ask Amount

06

6. Is there a trend in original ask amount over time?

- Overall the original ask amounts increased slightly over the seasons.
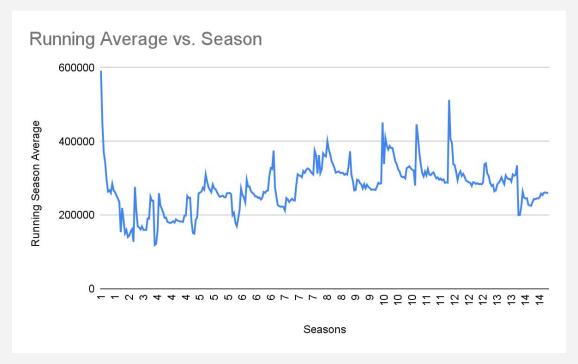
Season	Average Amount
1	235766
2	161667
3	239033
4	247078
5	256750
6	324957
7	310129

Season	Average Amount
8	309740
9	286083
10	320924
11	287813
12	288120
13	334823
14	258954

Season vs. Average Ask Amount

6. Is there a trend in original ask amount over time?

- The running average of each season shows that the average ask amount fluctuates within each season.

- The overall slight increase can be observed in the running average as well.
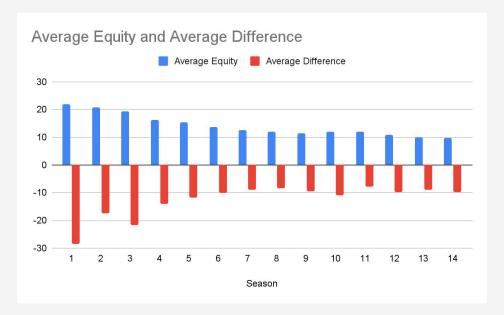
Running Average vs. Season

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Trend over Time - Equity

7. How did equity change over time?

- Over the seasons, the average equity offered from entrepreneurs decreased.

- In every season, the average equity originally offered by the entrepreneur was less than the equity finally agreed on in the deals.

- This difference between the original equity offer and the final equity deal decreased over time.

Season	Average Equity	Average Difference
1	21.7	-28.4
2	20.8	-17.4
3	19.3	-21.7
4	16.2	-14.1
5	15.3	-11.8
6	13.7	-10.0
7	12.7	-9.0

| Season	Average Equity	Average Difference
8	12.1	-8.5
9	11.5	-9.6
10	11.9	-11.0
11	12.0	-7.8
12	10.8	-9.7
13	10.1	-8.9
14	9.6	-9.8

7. How did equity change over time?

- Over the seasons, the average equity offered from entrepreneurs decreased.

- In every season, the average equity originally offered by the entrepreneur was less than the average difference between original equity asked and final equity reached.

- This difference between the original equity offer and the final equity deal decreased over time.

Average Equity and Average Difference

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Impact of Equity on Success

8. Does equity percentage have an impact on pitch success?

- The equity originally offered by the entrepreneurs were split into deciles, in ascending order. Each decile was analyzed by the number of successful pitches and the proportion of successful pitches.

- The most successful equity deciles were 2, 4, and 7. The least successful equity deciles were 3, 8, and 10.

Equity Decile	Successful Pitches	Success Proportion
1	75	0.59
2	91	0.71
3	70	0.55
4	85	0.66
5	83	0.65
6	80	0.63
7	85	0.66
8	59	0.46
9	72	0.56
10	66	0.52

8. Does equity percentage have an impact on pitch success?

- The relationship between equity percentage and pitch success appears to have a very slight downward trend.

- Pitches with lower original equity percentages offered have a higher success rate.

Equity Decile	Successful Pitches	Success Proportion
1	75	0.59
2	91	0.71
3	70	0.55
4	85	0.66
5	83	0.65
6	80	0.63
7	85	0.66
8	59	0.46
9	72	0.56
10	66	0.52

Equity Decile and Pitch Success

4. Conclusion