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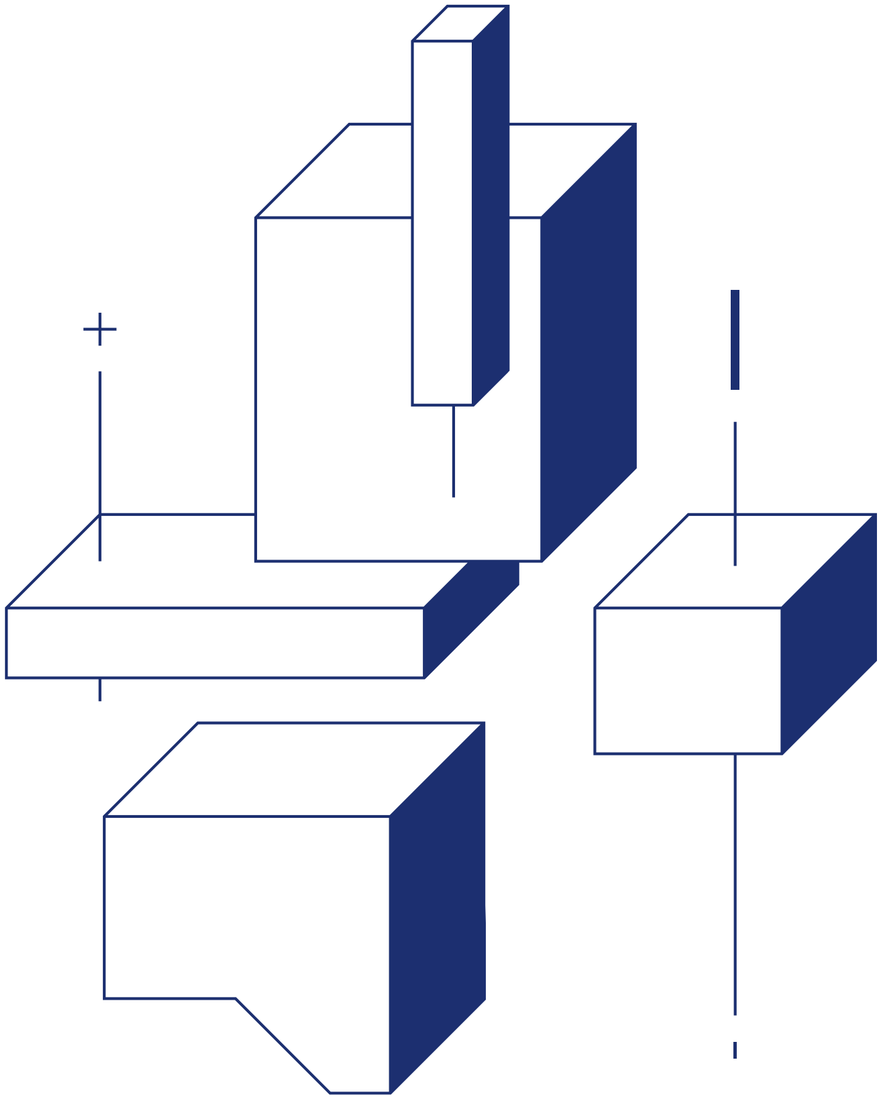
Prediction of Deals



Overview

Predictive Research Question

Do industry, valuation, number of entrepreneurs, equity exchange, and amount of money asked for lead to a deal in Shark Tank?

Provides valuable insights for:

Entrepreneurs looking to pitch their ideas on the show

Help investors make more informed decisions about which companies to invest in.

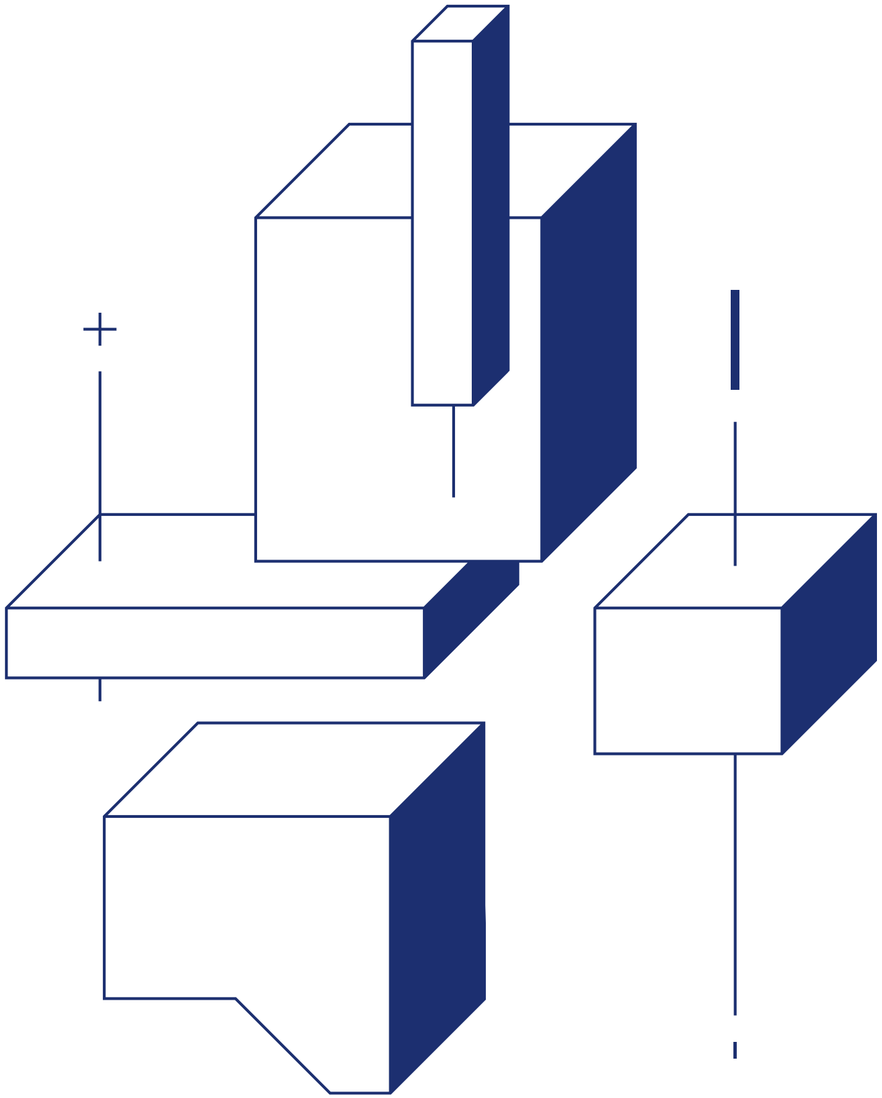
Potential Impacts

why our findings matter

Determine which industries are **most likely to succeed** on Shark Tank, helping entrepreneurs focus their efforts

Help entrepreneurs prepare better pitches by **highlighting the critical elements** that investors look for

Provide a benchmark for comparing different companies and **predicting their success** in the market, helping investors **make more informed decisions** about which companies to invest in



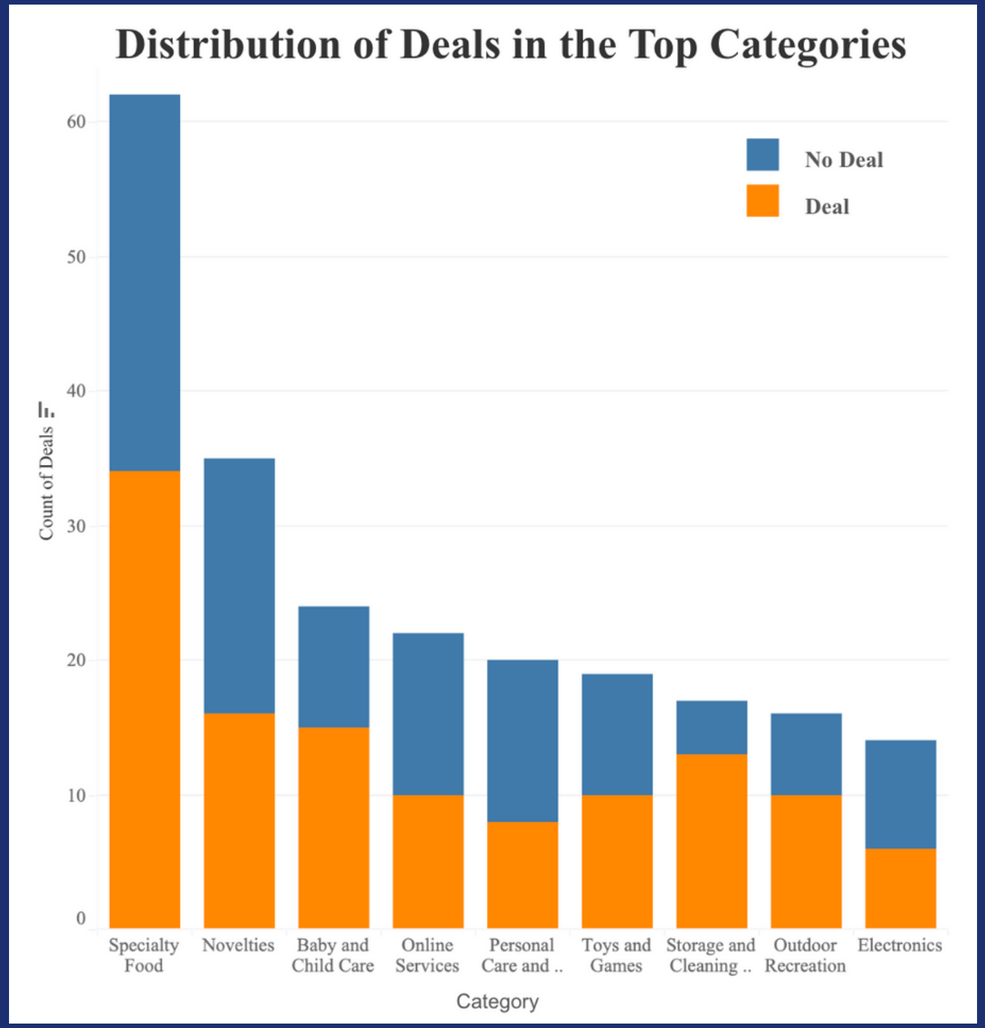
Methodology

The Data

Data was obtained in Kaggle from Urlik Thyge Pederson

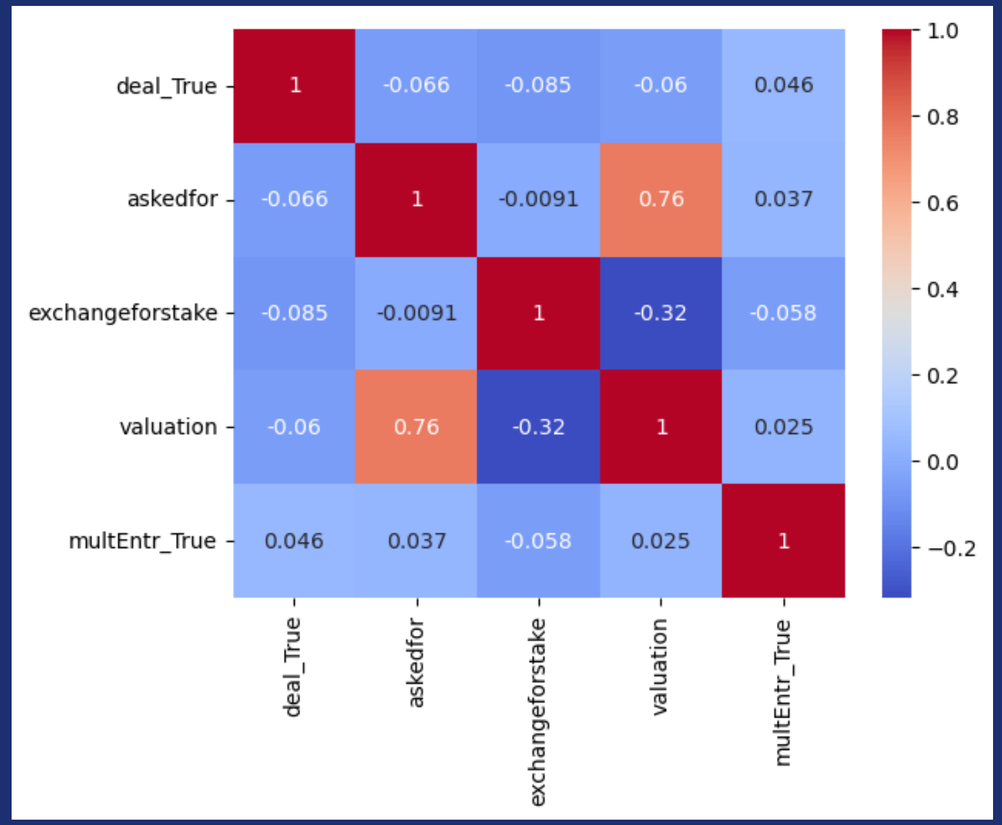
Core Descriptors

- Title, Description, and Category of Idea
- Show Season and Episode Number
- Money Asked for, % Exchange for the Stake, and Valuation
- Entrepreneur(s) and Sharks
- Deal or No Deal

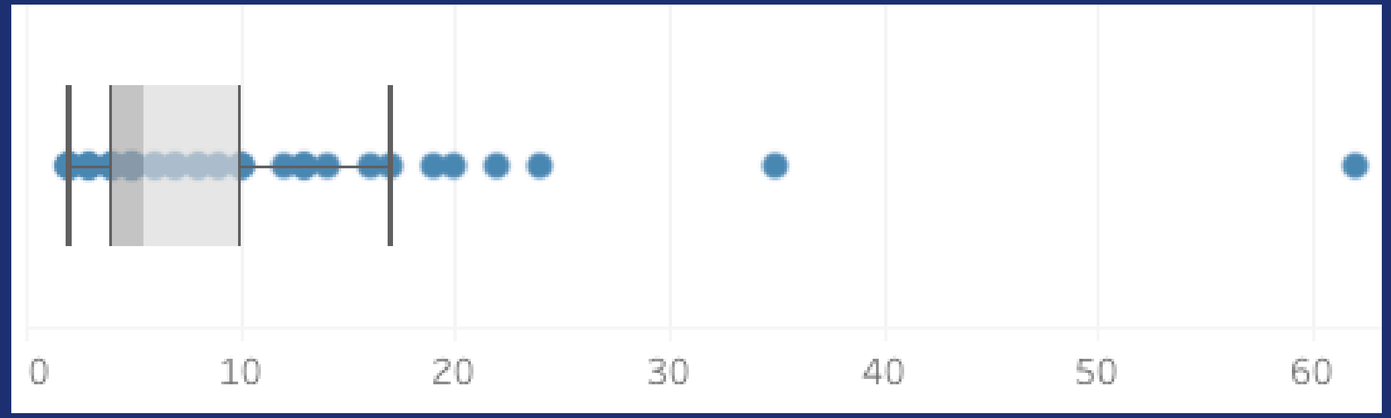


Data Insights

Heatmap correlation between all variables of interest



Pitches in Categories



- **Mean:** 9.17, Median: 5.5, Range: 62
- **Outliers:** Specialty Food, Novelties, Child Care, Games, Personal Care, Online Services

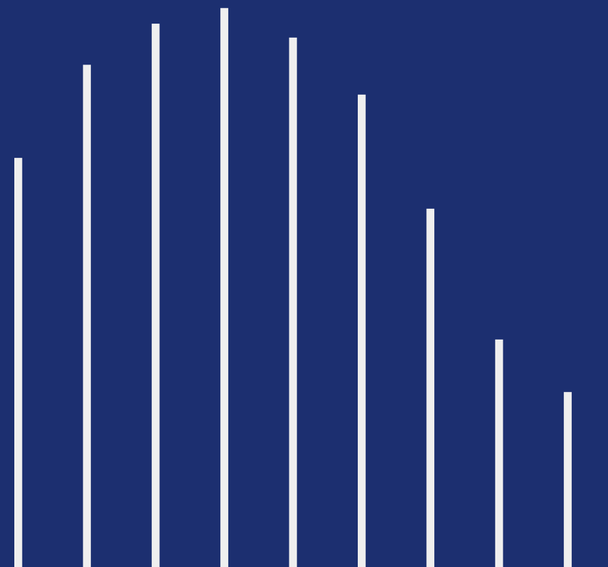
Algorithms and Models

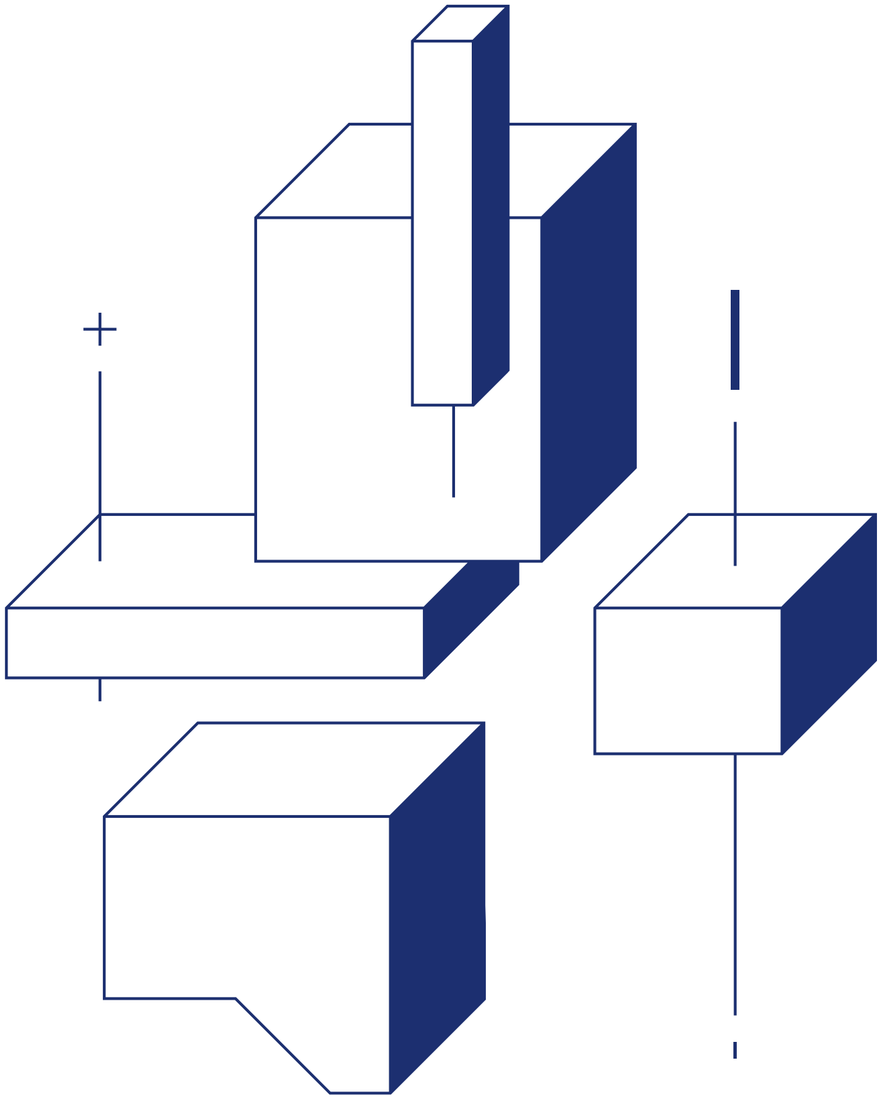
What factors increase the likelihood of a deal?

Is there a relationship between details about the company and a deal being struck?

- Company valuation
- Whether there are multiple entrepreneurs
- Company industry

Can we predict whether a deal is made using attributes such as Industry, valuation, % stake, multiple entrepreneurs, and amount asked for?





Findings

Is there a relationship between details about the company and a deal being struck?

We found:

- **No significant relationship** between industry and a deal being struck
  - Adj. r-squared: **50.5%**
- **No significant relationship** between company valuation and a deal being struck
  - R-squared: **10.2%**
- **No significant relationship** between having multiple entrepreneurs and a deal being struck
  - R-squared: **18.7%**

What factors increase the likelihood of a deal?

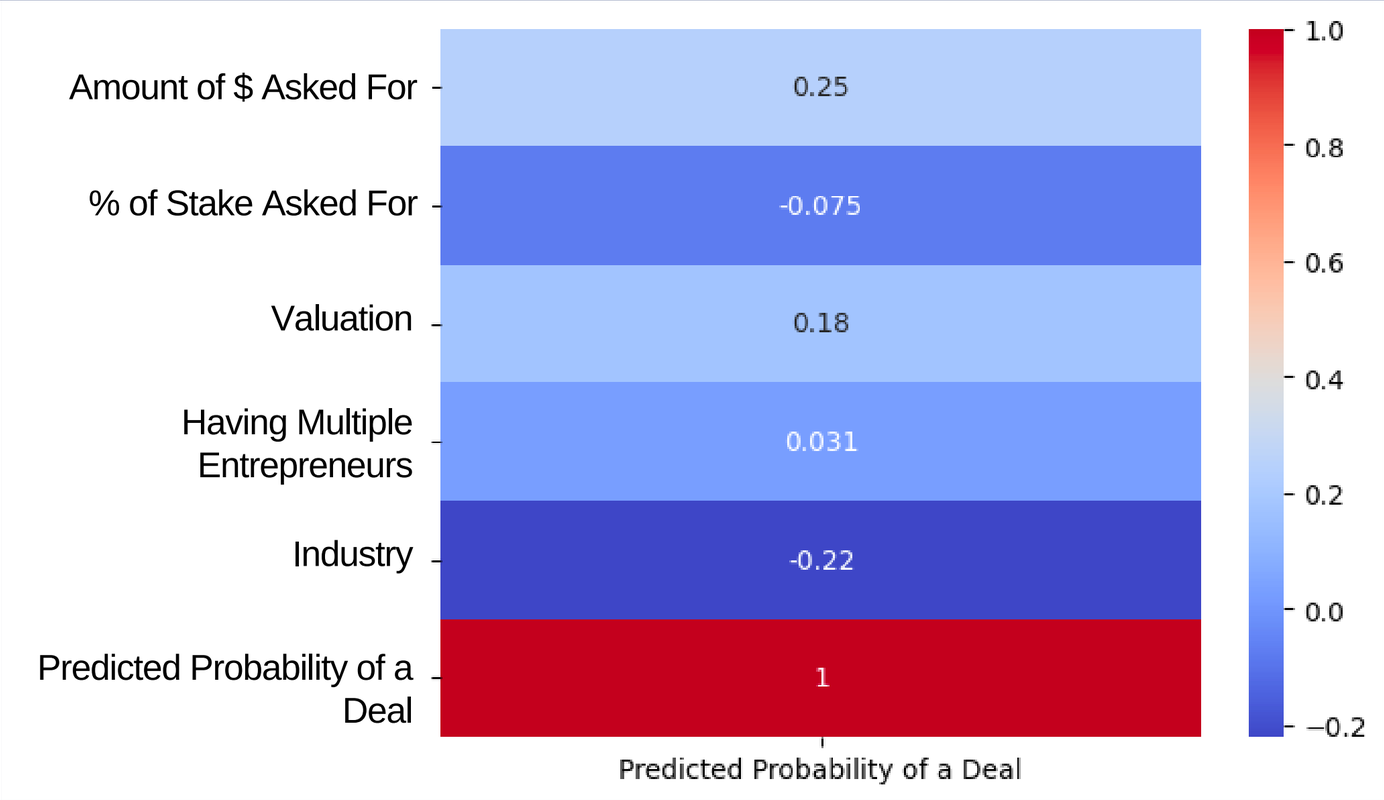
We found:

- How much money the company asked for
- The % of stake the company asked for
- The company's valuation
- Whether there were multiple entrepreneurs
- The company's industry

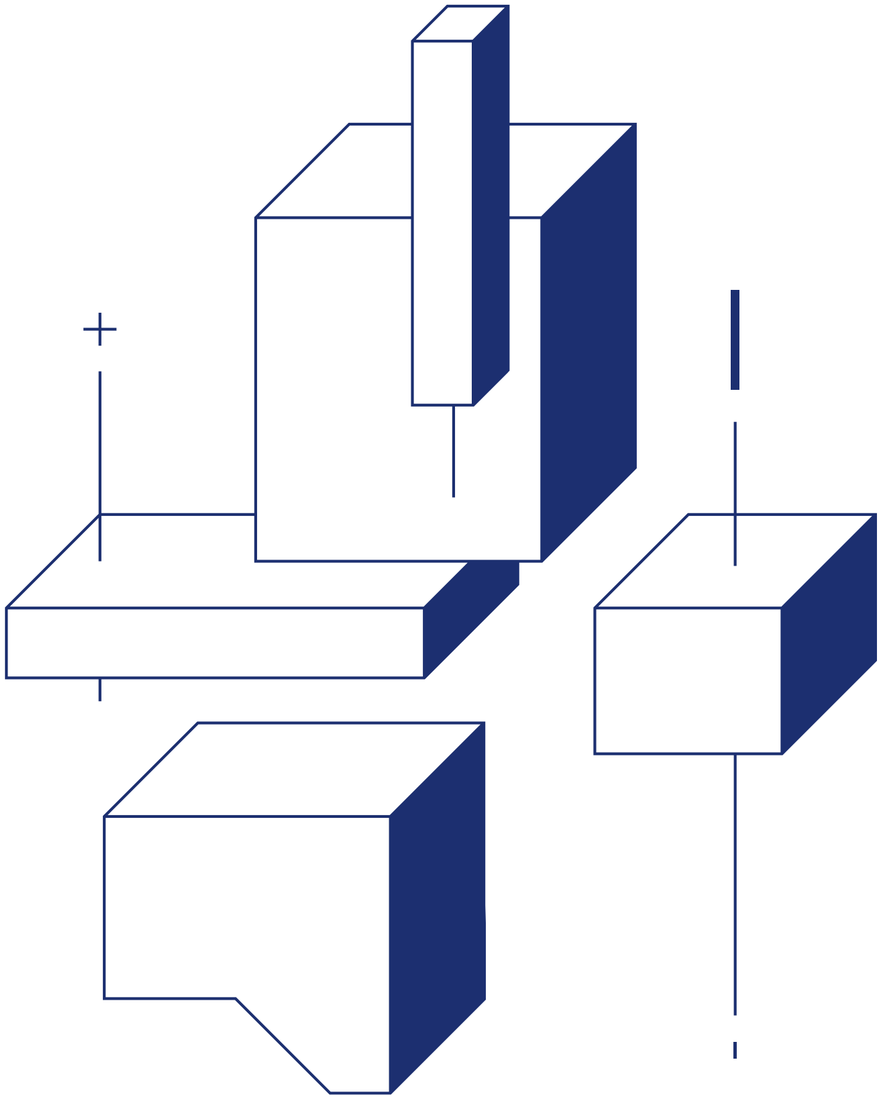
To have **no significant effect** on the likelihood of a deal

Accuracy score: 48%

What factors are important predictors of a deal?

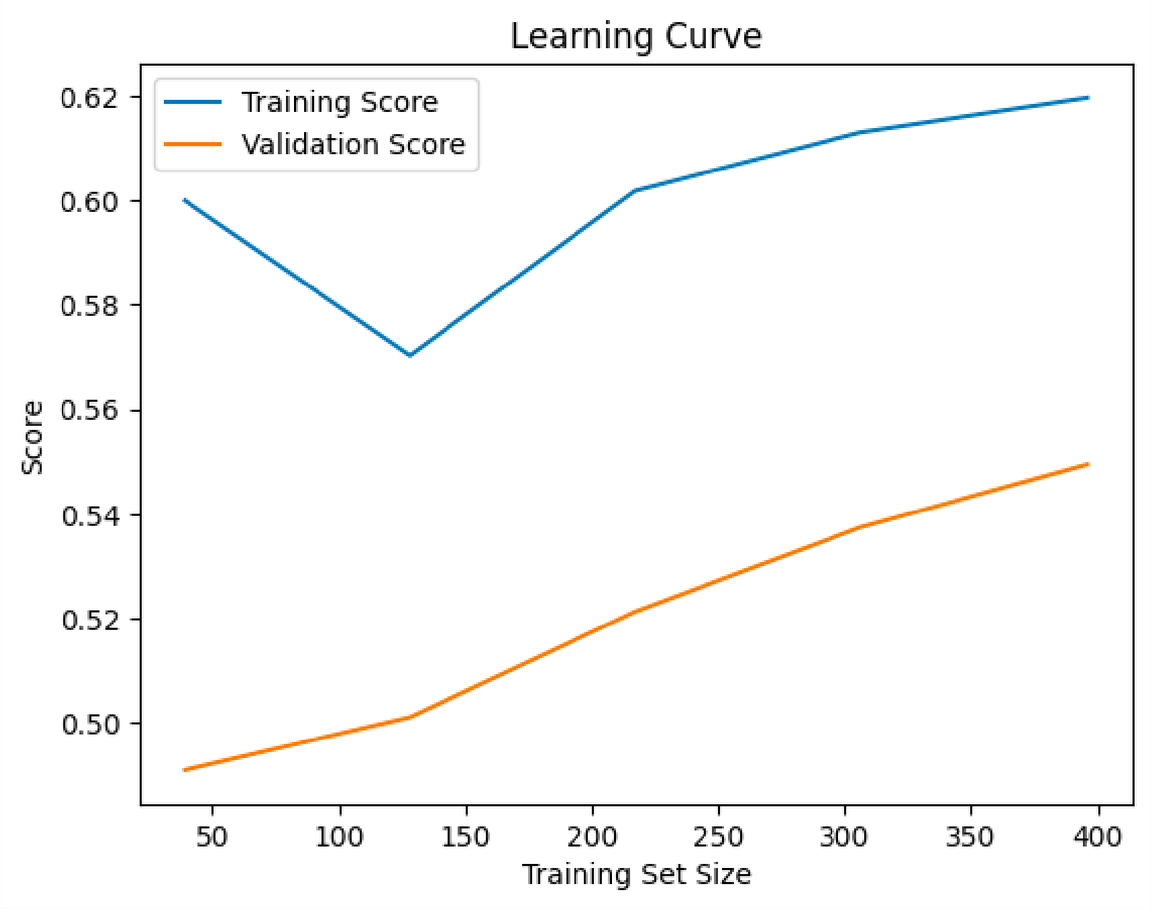


- The company's **valuation** and the **amount of money it is requesting** are more important predictors of a deal than the company's industry.
  - This model had a **61%** accuracy score



Recommendations and Conclusion

Additional Insights



- Having more data helps **improve the accuracy** of the models
- Upward trend -> better predictions possible

Recommendations and Conclusions

recap of relationships and model scores

- weak accuracy scores
- pessimistic models
- **valuation** and **amount asked for** more accurate predictors

need for further research

- expand dataset to get **better understanding**
- gather more information for **improved predictions**

benefits and applications

- help weed out entrepreneurs
- help **improve entrepreneurs' chances** of securing a deal
- serve as **standard for evaluation**