

# STARTUP ACQUISITION MODELING

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# THE GOAL

*—Identify startups that will ultimately be acquired with maximum precision.*

# PREVIEW

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*—Our model was 28% precise when it came to identifying acquired startups.*



## RESULT 1

Class imbalance led us to run models using two different techniques.



## RESULT 2

Random Forest model yielded the best results.



## RESULT 3

28% of acquired companies were correctly classified by the model.

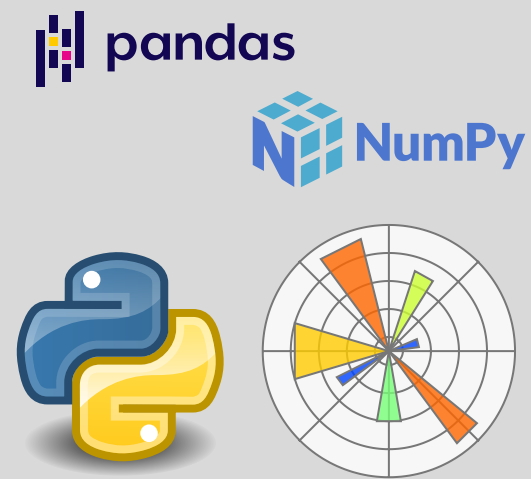
# THE PROCESS

4

## DATA COLLECTION

crunchbase  
kaggle

## DATA ANALYSIS



## MODELING



## EVALUATION



# THE DATA

✓ 20,000+ DATA POINTS

🧩 900+ FEATURES

## Features included:

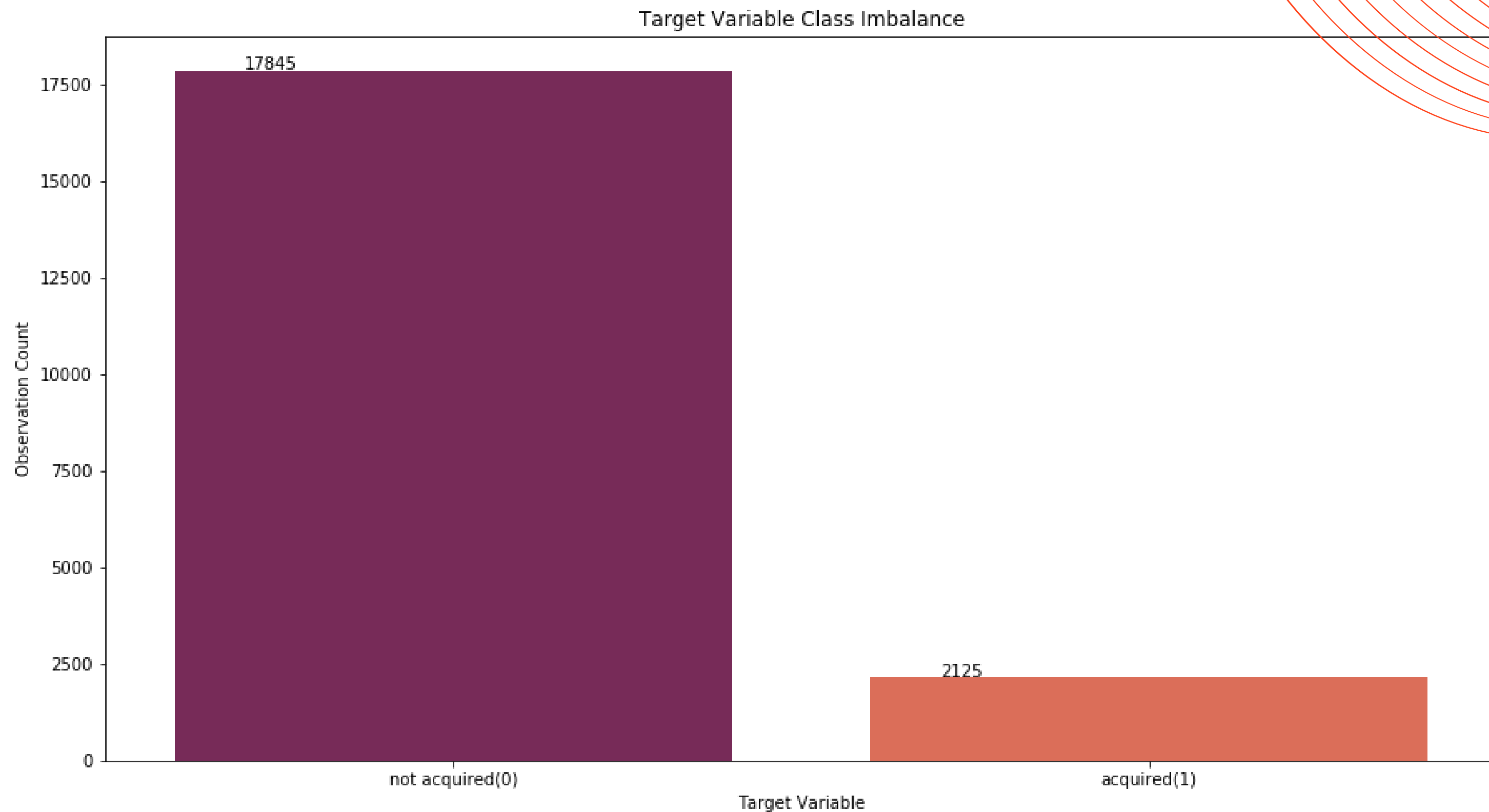
funding information

company locations

industry categories

time between funding

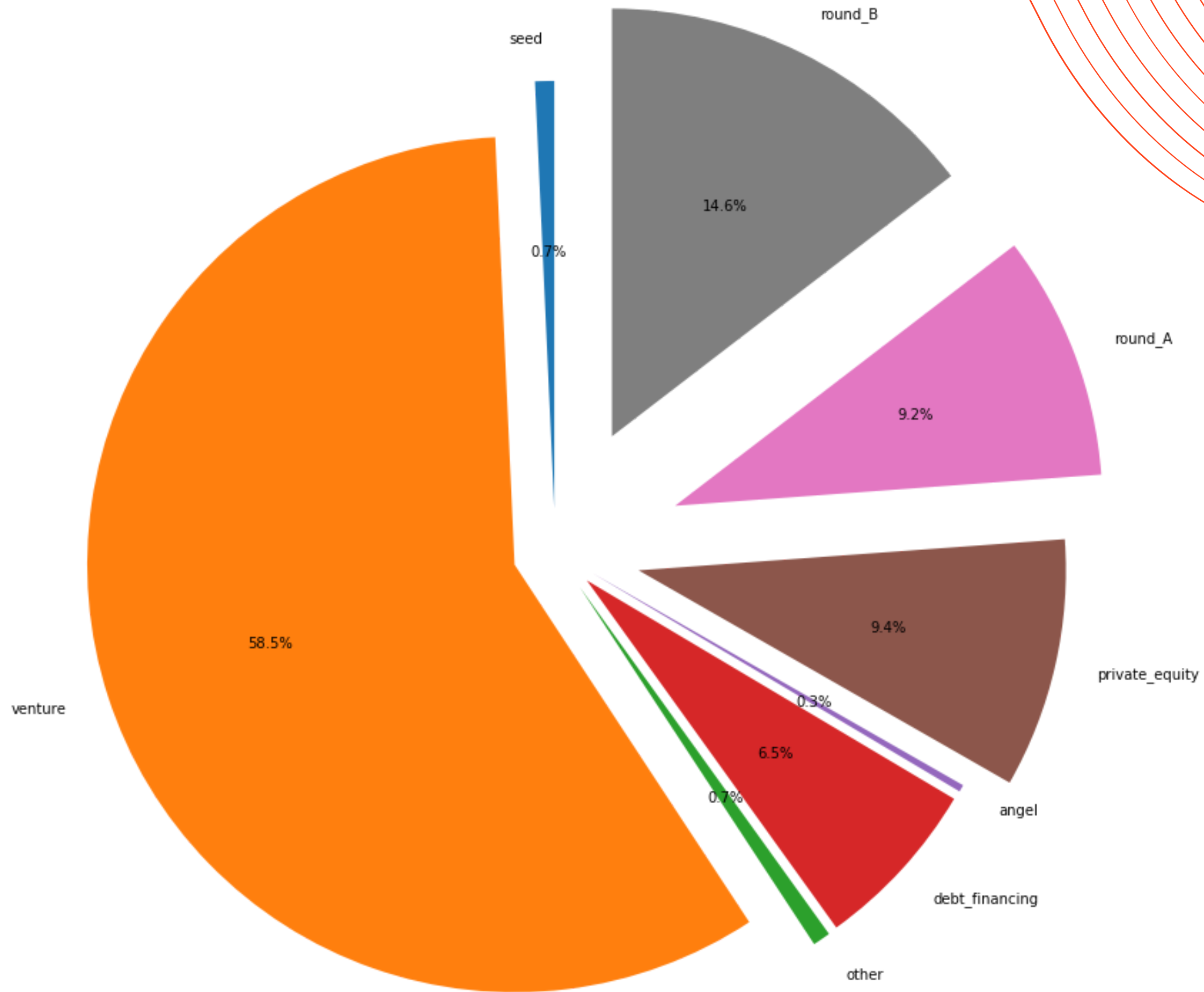
# THE DATA





# THE DATA

Funding Sources For Acquired Companies.





# THE MODEL

8

—We hit a maximum precision score of .28

$$13 / 36 = .28$$



## FINDING 1

Base model performed better than any of our other models. However, upon further inspection the precision scores would vary wildly. (from .13 to .32)



## FINDING 2

Downsampling: more 'acquired' class predictions, but many more false positives.

Combination Up/Downsampling: drastically reduced false positives, while preserving precision.



## FINDING 3

Random Forests produced highest precision.

## ↓ REDUCING LOSS

Being able to precisely determine which companies will be acquired offers advantages to small VC firms that might not be sitting on large amounts of capital.

## ↑ INCREASING CAPITAL

Being able to bet on winning companies will allow your VC firm to increase capital, so in the future it would be possible to assume more risk on investments.

# APPLICATIONS

*—Making strategic moves now for more flexibility later.*

# NEXT STEPS

## PIVOT

Consider pivoting to a more interpretable model, using insights gained to drive decision making.

## INCREASE DATA COLLECTION

Increase data collection efforts in order to increase the precision of the current model.



## CONTACT US FOR INQUIRIES AND CONCERNS

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