

# Getting the Answers Quicker

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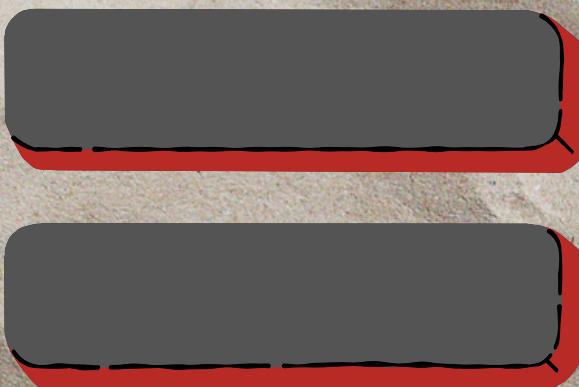
Quora

# Quora:

- question and answer website
- 300 million users / month
- goal: get users answers as quickly as possible

Quora

What is the  
funniest joke you  
know?



What is the  
funniest joke of  
all time?

O\_o\_o



Quora

Question 1

How do we time  
travel?

Question 2

Is time travel  
theoretically  
possible?

### Natural Language Processing

- remove punctuation
- tokenize
- make lowercase
- remove stopwords
- stem/lemmatize
- vectorize

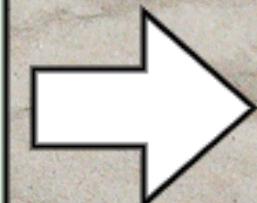
Question 1

[0,0,0,1,0,0,1....]

Question 2

[1,0,0,1,0,0....]

Classification  
Model



DUPLICATE

Quora

Question 1

What do you  
think about the  
Bermuda  
Triangle?

Question 2

What are your  
theories about  
Bermuda  
Triangle?

Question 1  
Word  
Count

8

Question 2  
Word  
Count

7

Common  
Words

4

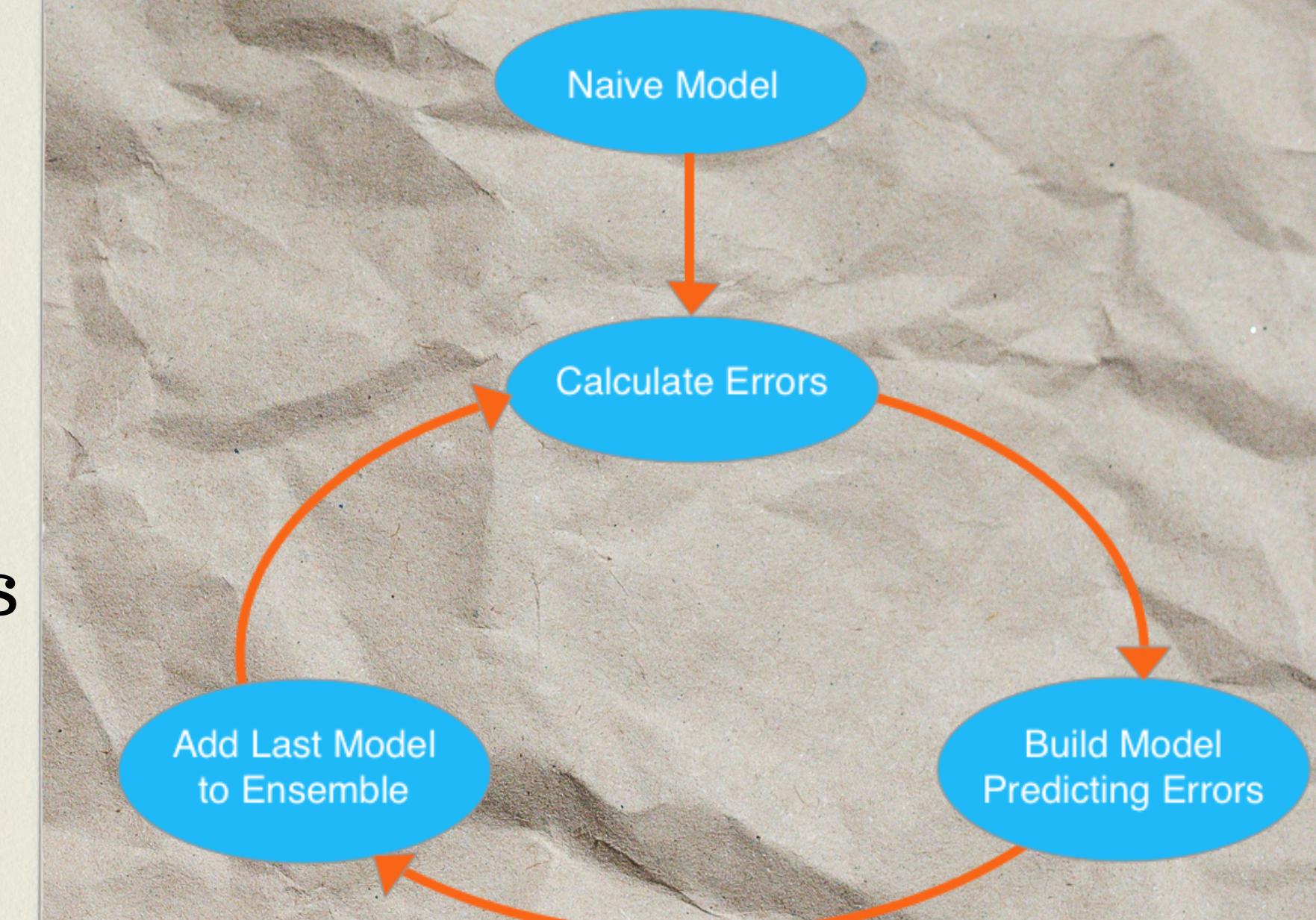
Cosine  
Similarity

0.68

Quora

# Model = XGBoost

- eXtreme Gradient Boost
- ensemble technique
- new models added to improve on weaker models



<https://www.kaggle.com/code/dansbecker/xgboost>

Quora

# Model Performance

- Accuracy = 69.7%
- Precision = 59.8%
- Recall = 55.5%



# Any Questions?

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