EMOTION AI

Emotion Classification for NLU

Analysis by

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BUSINESS CASE

Customer Experience: Implicit Goals

Identify current emotional state.

Guide to a more desirable emotional state or maintain current emotional state.

No Emotion

Anger

Disgust

Fear

Happiness

Sadness

Surprise

Image courtesy of Shutterstock

DATA & METHODS

DailyDialog
PushShift Reddit API
Happy Path Custom

LEARN MORE

Python
Multi-Class Text Classification Model

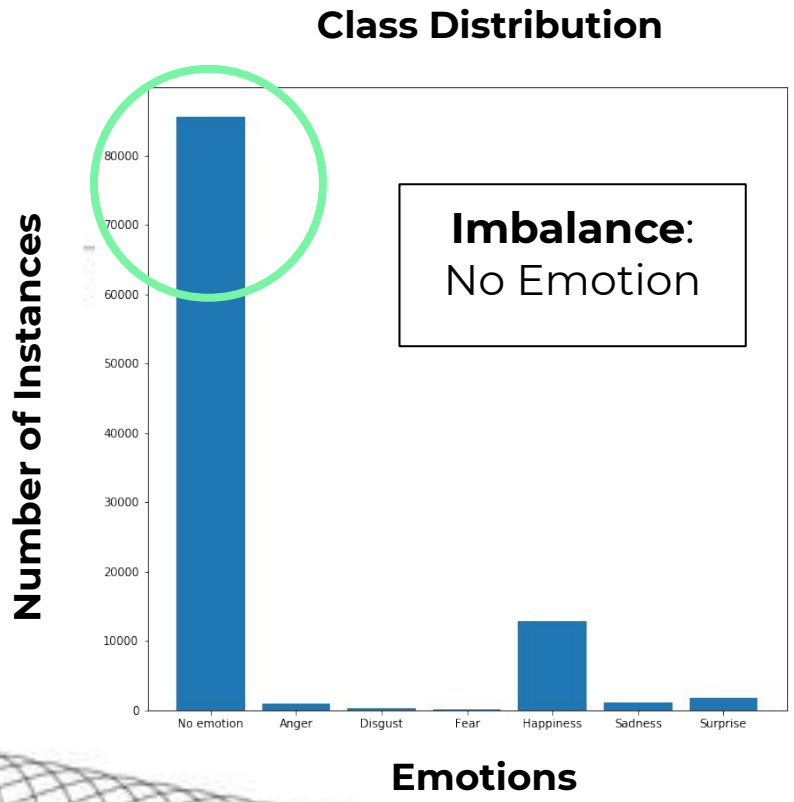
Logistic Reg
Naive Bayes
Random Forest
SVM
Neural Networks

DAILY DIALOG

102,980 Utterances

Avg. 11.6 words per utterance

Topics & Types

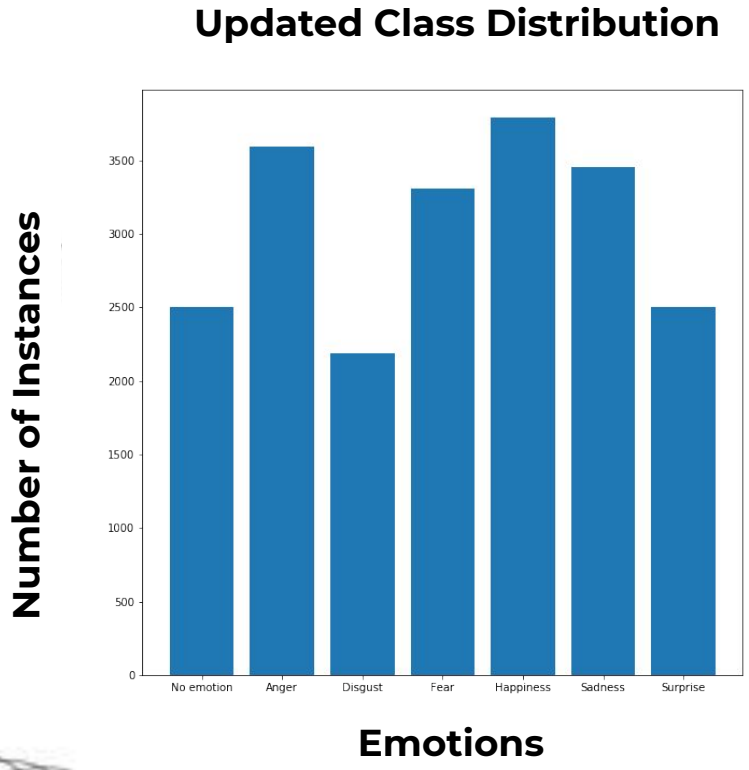


API & CUSTOM

21,347 utterances

Better Class Distribution

Vairety of simple and complex utterances.



PIPELINE

I'm SO MAD!

You sound angry.

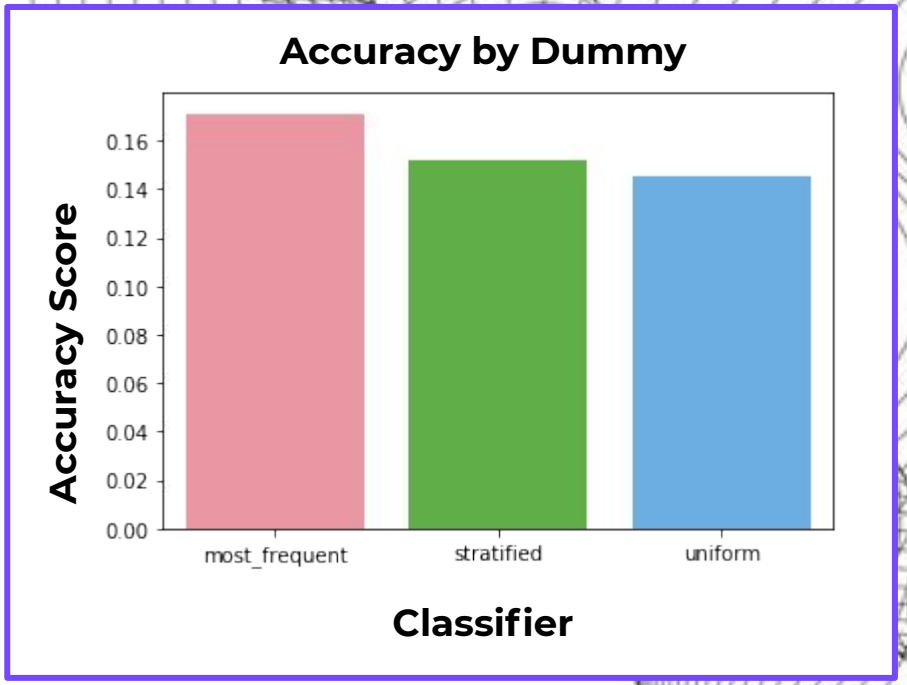
1	2	3	4
Feature Engineering	**Cleaning**	**Vectorizing**	**Prediction**
1 Exclamation .71 Cap Ratio Mad : Angry .89	Lowercase Punctuation Lemmatize Contractions	Count Vector TF-IDF Vector	Angry

BASELINE MODEL

Stratified Accuracy

0.15

the expected success rate of simply guessing a classification.



BEST MODEL

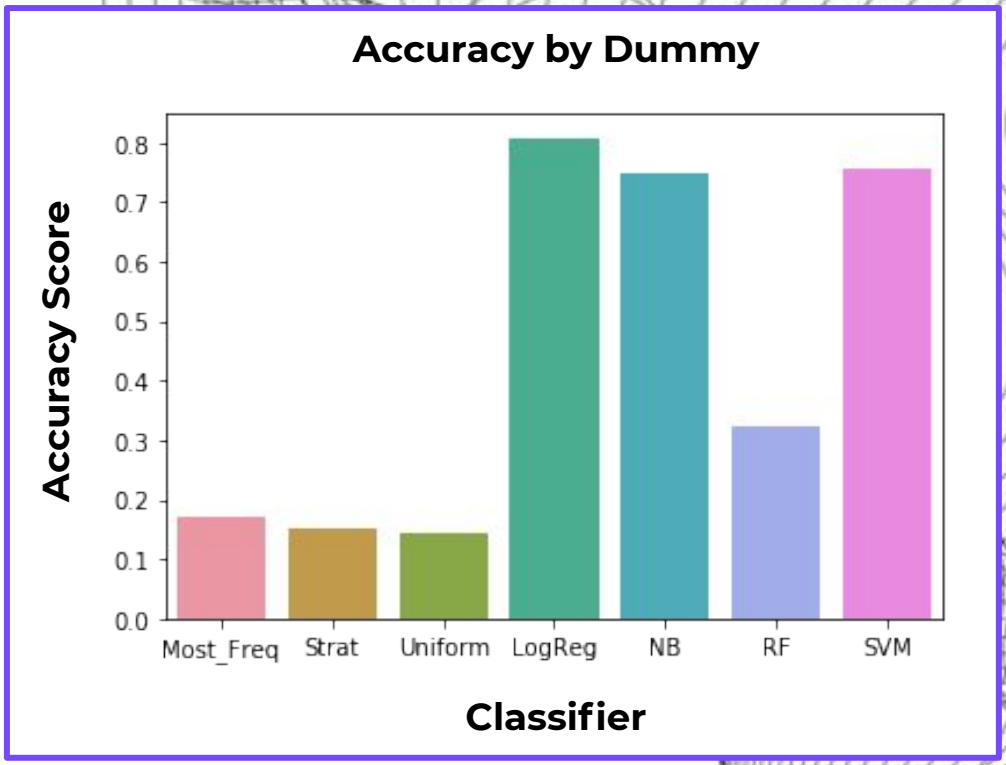
Accuracy

0.8

F1 Score

0.8

Breaks on long text



KEYWORD DEMO

```
message = input("Hi!  How're you feeling today?\n\n")
emotion_ai(message)
```

```
Hi!  How're you feeling today?
```

EDGE DEMO

```
message = input("Hi!  How're you feeling today?\n\n")
emotion_ai(message)
```

```
Hi!  How're you feeling today?
```

Image courtesy of the mockup club

NEXT STEPS

- *Improved Feature Engineering*
  - *Parts of Speech*
  - *Emotion Score*
- *Neural Networks*
- *Chatbot Framework*
- *Beta Phase to gain more data*

Thank You