

INTRO TO

AI



AI CLUB
AT
MSU

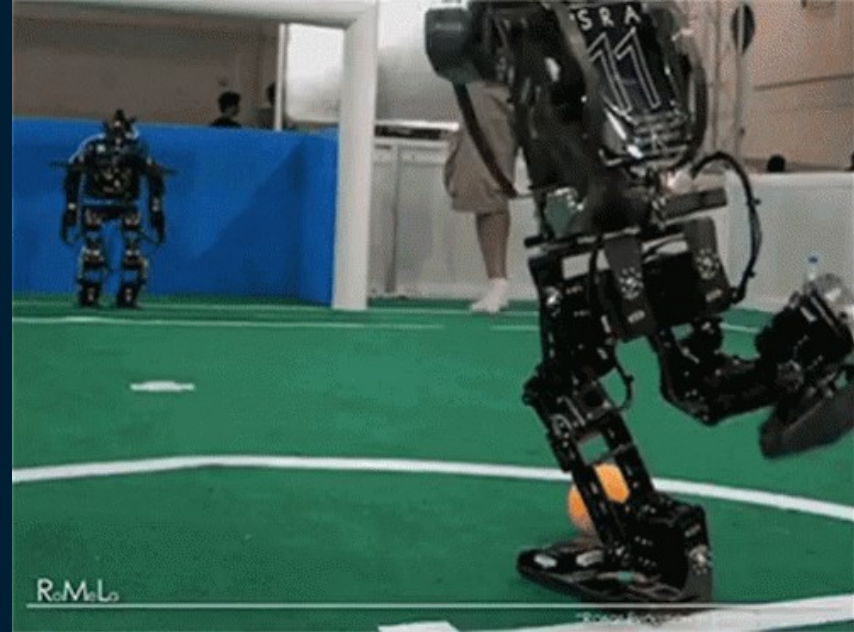
Sentiment Analysis Workshop



LET'S TALK
AI

What is AI?

Building smart programs capable of performing tasks that typically require human intelligence.



NOW, REALLY



“
Alexa, sing
'Bohemian
Rhapsody'!
”



TRUTH IS...

AI is still a baby. It's difficult to predict what it would look like in 20-30 years.

But today, it's taking over the world rapidly!



Artificial Intelligence Industry Overview



Market Size Growth

The AI industry could be worth more than \$15 trillion by 2030. 80% of emerging technologies will have AI foundations by 2021.

80%



Business Adoption

37% of organizations in 2019 use AI in the workplace. The number of enterprises using AI in business grew by 270% between 2015 and 2019.

37%



Challenges

59 % of organizations named 'shortage of data science talent' as the primary barrier to realizing value from their big data technologies.

59%



Executives say the primary goals of AI implementation are:

Enhancing the features, functions, and performance of their products

51%



Optimize internal operations

Freeing up workers

36%



36%



AI vs. Human Labor

Cognitive technologies such as robots, AI, machine learning, and automation will replace 16% of U.S. jobs by 2025.

16%



Sources:
PwC's Global Artificial Intelligence Study: Exploiting the AI Revolution
Gartner
GlobeNewsWire Outlook on Artificial Intelligence in the Enterprise 2016
Harvard Business Review
Forrester, Robots, AI Will Replace 7% Of US Jobs By 2025

STATE-OF-THE-ART AI YOU CAN USE!!!



A decorative graphic on the left side of the slide, consisting of multiple concentric hexagonal outlines in a light green color, creating a tunnel-like effect that draws the eye towards the center. The number '02' is placed within the innermost hexagon.

02

Sentiment Analysis Workshop

What is Sentiment Analysis?

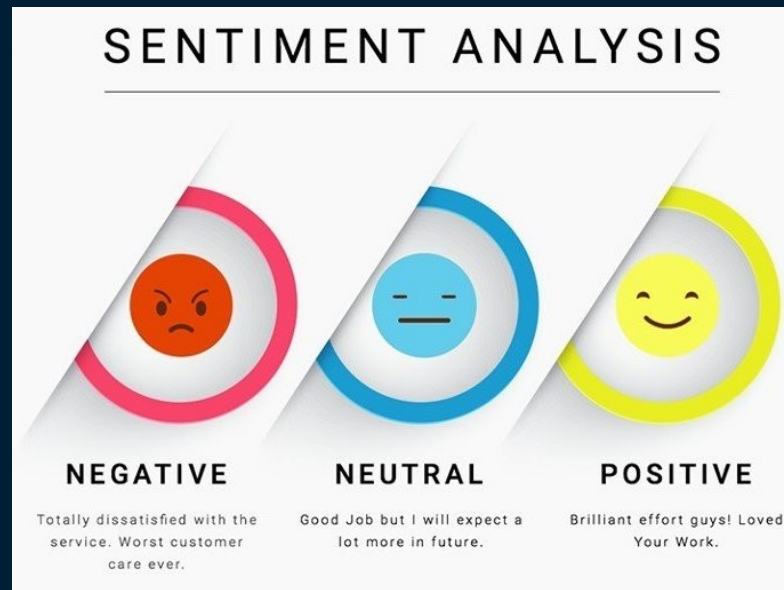
The process of using Natural Language Processing(NLP) to determine if the polarity of the given text is positive, negative or neutral.

'You guys did a great job!' - Positive

'I was not pleased with the service' - Negative

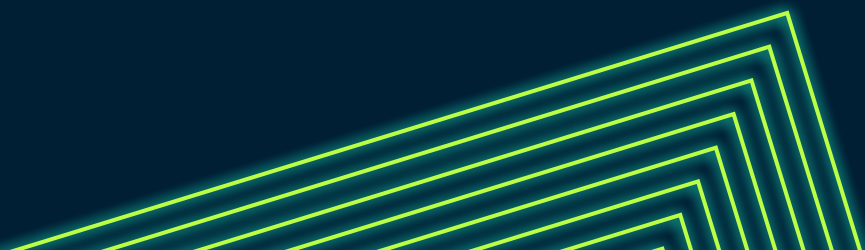
'I had to wait 2 hours for service. Loved every minute of it!' - Negative

This task can get difficult, especially when sarcasm is involved.





Practical Uses

- ❖ Analyzing customer feedback(reviews, surveys, social media interactions, ect.)
 - ❖ Determine what customers really like/hate
 - ❖ Sort large datasets
 - ❖ Better understand feedback
- 

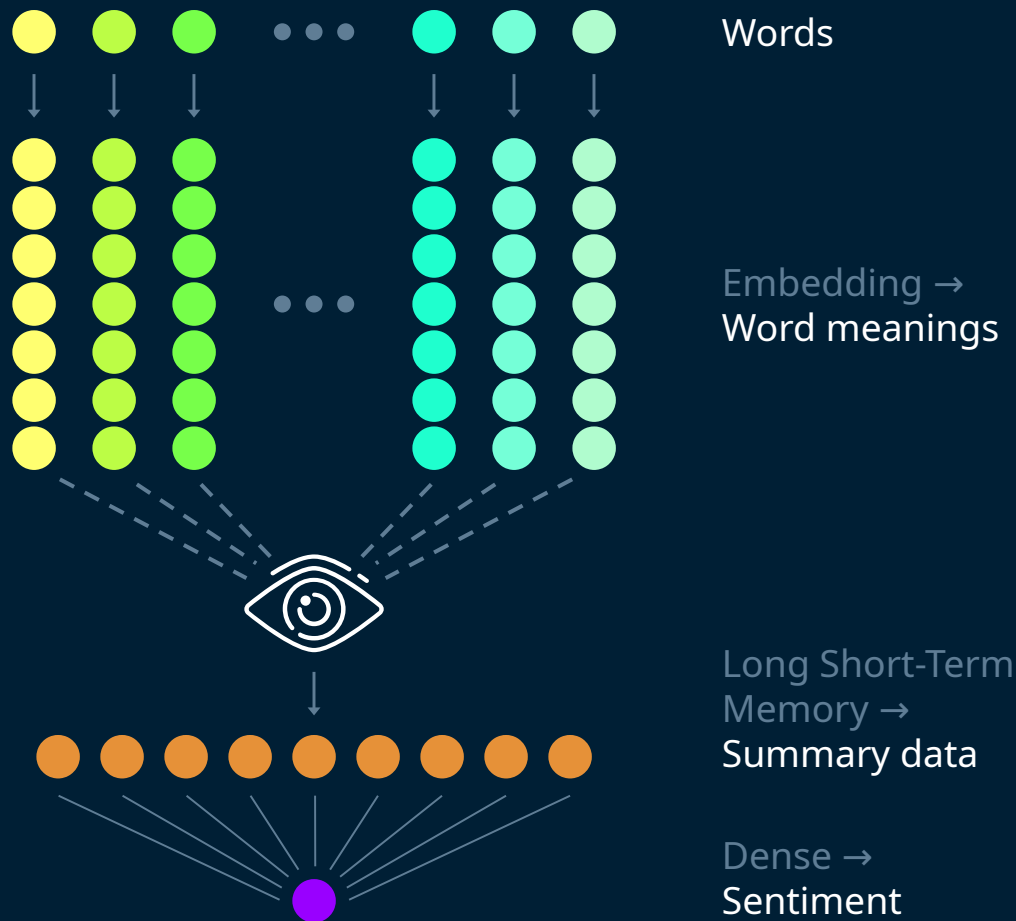
Training Data

We will be working with Tweets to airlines and use sentiment analysis to determine the sentiment of a given phrase.

Each Tweet has a value determining if the phrase is positive or negative. We will use this value for training.

| | | | |
|-------|--|----------|--------------------|
| 1 | @VirginAmerica plus you've added commercials t... | positive | 570301130888122368 |
| 3 | @VirginAmerica it's really aggressive to blast... | negative | 570301031407624196 |
| 4 | @VirginAmerica and it's a really big bad thing... | negative | 570300817074462722 |
| 5 | @VirginAmerica seriously would pay \$30 a fligh... | negative | 570300767074181121 |
| 6 | @VirginAmerica yes, nearly every time I fly VX... | positive | 570300616901320704 |
| ... | ... | ... | ... |
| 14633 | @AmericanAir my flight was Cancelled Flightled... | negative | 569587705937600512 |
| 14634 | @AmericanAir right on cue with the delays 🧨 | negative | 569587691626622976 |
| 14635 | @AmericanAir thank you we got on a different f... | positive | 569587686496825344 |
| 14636 | @AmericanAir leaving over 20 minutes Late Flig... | negative | 569587371693355008 |
| 14638 | @AmericanAir you have my money, you change my ... | negative | 569587188687634433 |

Model Overview





Teamwork

- ❖ It is highly recommended that you work in pairs!
- ❖ This will make the workshop easier
- ❖ It will also help with grasping the topics covered
- ❖ Teamwork is optional, but highly recommended!