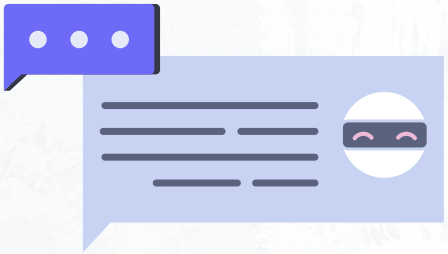
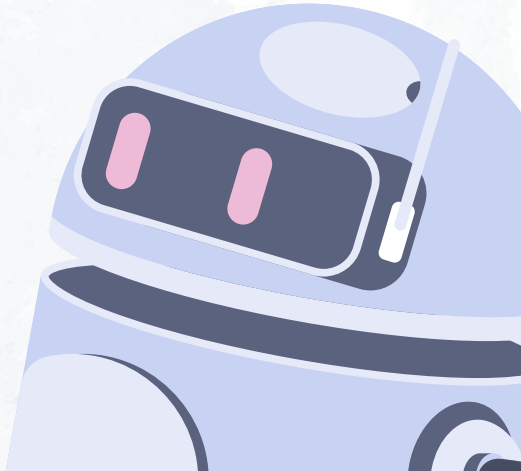
# Word2Vec

Tiffany Ahn

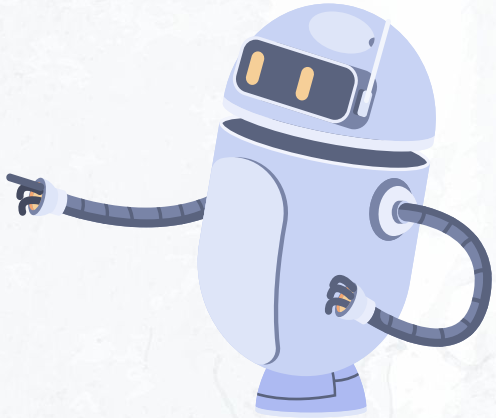




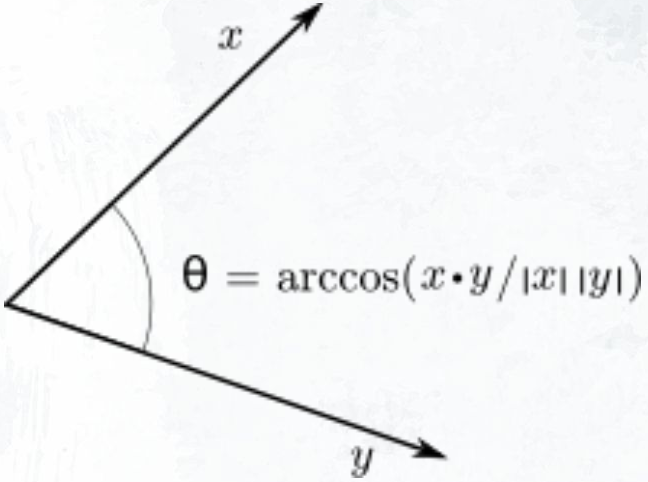
# Table of contents

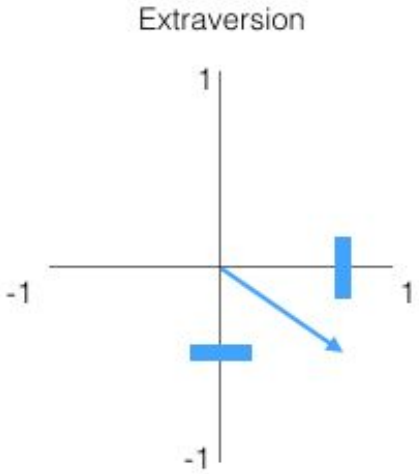
01 →

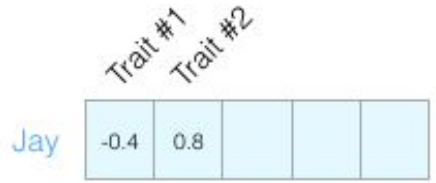
# Word Embeddings



| | |
|---|---|
| Openness to experience | 79 out of 100 |
| Agreeableness | 75 out of 100 |
| Conscientiousness | 42 out of 100 |
| Negative emotionality | 50 out of 100 |
| Extraversion | 58 out of 100 |



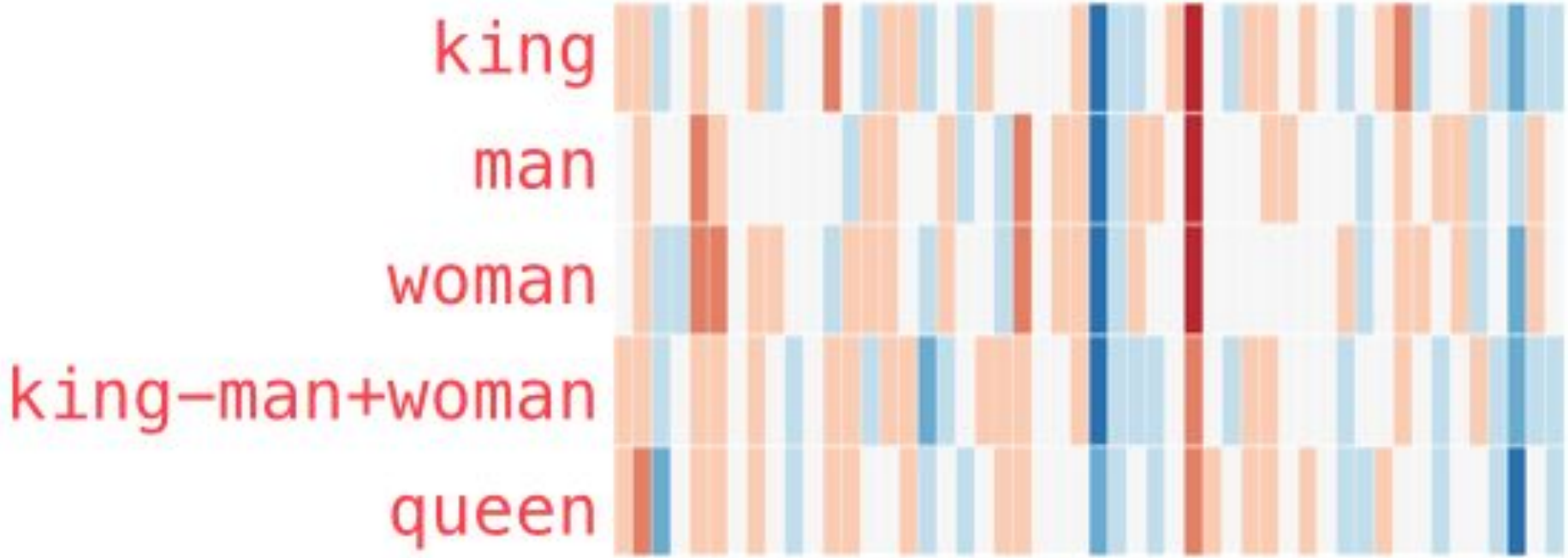
```
[ 0.50451 , 0.68607 , -0.59517 , -0.022801, 0.60046 , -0.13498 , -0.08813
, 0.47377 , -0.61798 , -0.31012 , -0.076666, 1.493 , -0.034189, -0.98173 ,
0.68229 , 0.81722 , -0.51874 , -0.31503 , -0.55809 , 0.66421 , 0.1961 ,
-0.13495 , -0.11476 , -0.30344 , 0.41177 , -2.223 , -1.0756 , -1.0783 ,
-0.34354 , 0.33505 , 1.9927 , -0.04234 , -0.64319 , 0.71125 , 0.49159 ,
0.16754 , 0.34344 , -0.25663 , -0.8523 , 0.1661 , 0.40102 , 1.1685 ,
-1.0137 , -0.21585 , -0.15155 , 0.78321 , -0.91241 , -1.6106 , -0.64426 ,
-0.51042 ]
```

“king”

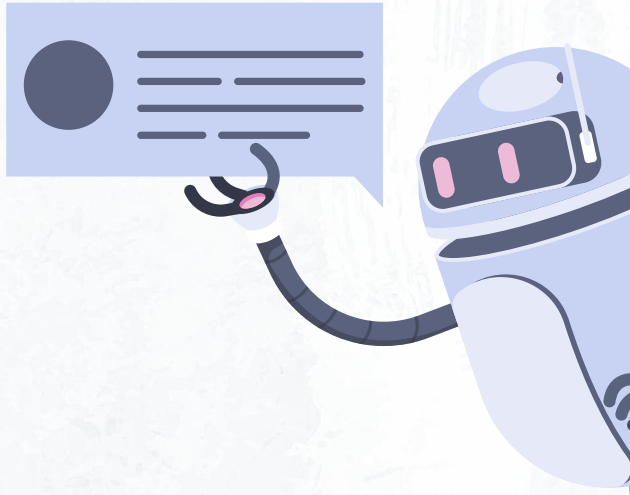
“Man”

“Woman”

king - man + woman ~= queen



02 →



# Training method 1: Continuous Bag of Words

A large language model (LLM) is a type of language model notable for its ability to achieve general-purpose language understanding and generation.

| Input 1 | Input 2 | Output |
|---|---|---|
| A | large | language |
| large | language | model |
| language | model | (LLM) |

03 →

# Training method 2: Skip-Gram model

A large language model (LLM) is a type of language model notable for its ability to achieve general-purpose language understanding and generation.

| Output 1 | Output 2 | Input | Output 3 |
|---|---|---|---|
| A | large | language | model |
| large | language | model | (LLM) |
| language | model | (LLM) | is |


target
prediction
error
“I” +
am 0
was 0
will 0
... ...
play 0.01
write 0
-
am 0.5
was 0.1
will 0.2
... ...
play 0.01
write 0.02
=
am -0.5
was -0.1
will -0.2
... ...
play 0
write -0.02

04 →

# Next word prediction


so, are you
Aa
guys
still
going
q w e r t y u i o p
a s d f g h j k l
z x c v b n m
123
space
return

# Thank you!

## Any questions?