

Text to Numbers:

1. Count Vectorizer
2. Bag of words
3. TF-IDF

✓  
No Context.

Word Embedding : Context ✓

Thomas Mikolov +3 → 2013

Word2Vec

Brother - Man + Woman ⇒ Sister

Man - Women + King ⇒ Queen

Word2Vec

1. Continuous Bag of words

2. Skip gram

Inhouse  
(Create your own  
word2vec)

readymade available  
word2vec, Pretrained word2vec

COW :-

I have a cute cat .

Inputs

Outputs

Wikipedia, Google News

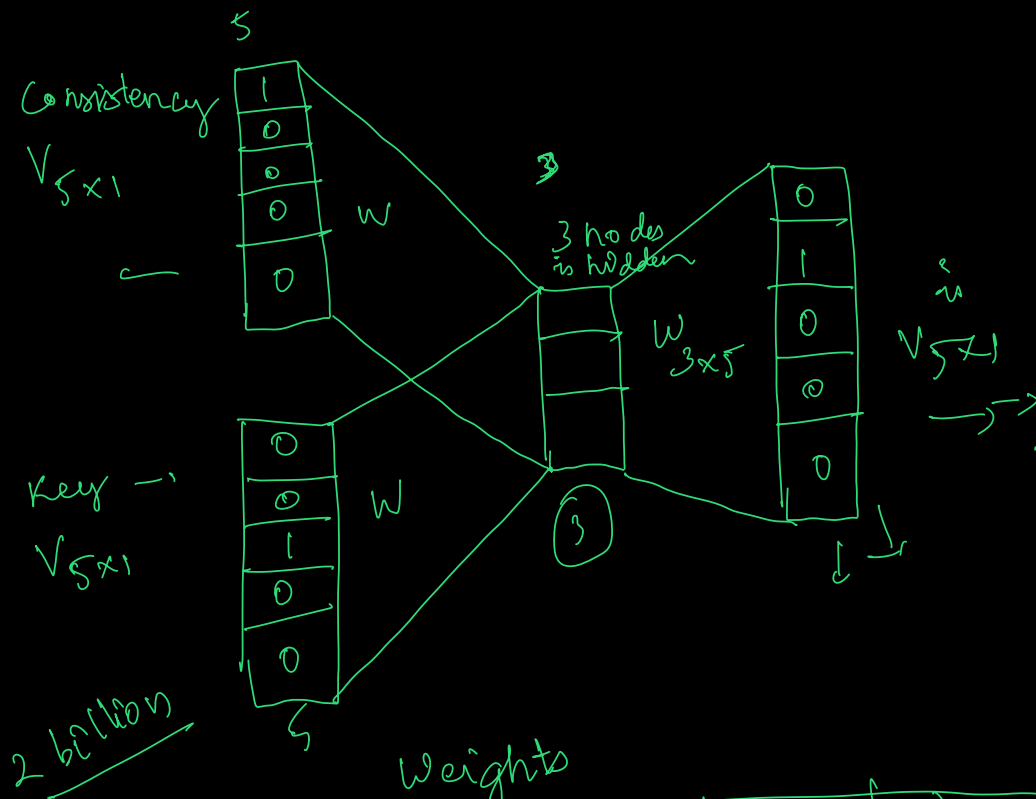
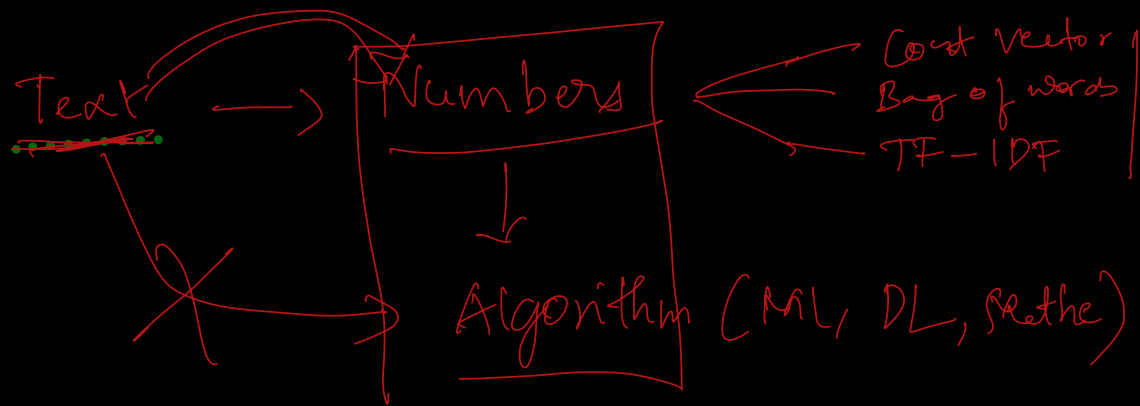
Consistency is key to Success

Vocabulary is 5

	Consistency	is	key	to	Success
Consistency	1	0	0	0	0
is	0	1	0	0	0
key	0	0	1	0	0
to	0	0	0	1	0
Success	0	0	0	0	1

Constructing the vector based on Vocabulary size





$w_{00}$	$w_{01}$	$w_{02}$	$w_{03}$	$w_{04}$
$w_{10}$	$w_{11}$	$w_{12}$	$w_{13}$	$w_{14}$
$w_{20}$	$w_{21}$	$w_{22}$	$w_{23}$	$w_{24}$

# Generate Word Embeddings

Weights from rigorous training

$$W_{3 \times 5}$$

$w_{00}$	$w_{01}$	$w_{02}$	$w_{03}$	$w_{04}$
$w_{10}$	$w_{11}$	$w_{12}$	$w_{13}$	$w_{14}$
$w_{20}$	$w_{21}$	$w_{22}$	$w_{23}$	$w_{24}$

One hot Vectors of Words  
Consistency is Key to Success

1
0
0
0
0

$$V_{5 \times 1}$$

0
1
0
0
0

$$V_{5 \times 1}$$

0
0
1
0
0

$$V_{5 \times 1}$$

0
0
0
1
0

$$V_{5 \times 1}$$

0
0
0
0
1

$$V_{5 \times 1}$$

Word Vector of Consistency

$$W_{3 \times 5} \times V_{5 \times 1}$$

$w_{00}$	$w_{01}$	$w_{02}$	$w_{03}$	$w_{04}$
$w_{10}$	$w_{11}$	$w_{12}$	$w_{13}$	$w_{14}$
$w_{20}$	$w_{21}$	$w_{22}$	$w_{23}$	$w_{24}$

X

1
0
0
0
0

$\Rightarrow$

$w_{00}$
$w_{10}$
$w_{20}$

✓

Consistency

$$V_{3 \times 1}$$

