

② Bag of Words :- (BOW)

Dataset

<u>Tent</u>	<u>O/P</u>
He is a good boy	1
She is a good girl	1
Boy and girl are good	1

↓ Tent preprocessing
(lower all the words case - stop word)

Vocabulary

good boy girl
frequency
3 2 2

$S_1 \rightarrow$ good boy	
$S_2 \rightarrow$ good girl	
$S_3 \rightarrow$ Boy girl good	

	good	boy	girl	O/P
S_1	[1	1	0]	1
S_2	[1	0	1]	1
S_3	[1	1	1]	1

Binary bag of Words :- $\left\{ \begin{matrix} \text{either} \\ 1 \text{ or } 0 \end{matrix} \right\}$ & BOW

{count will get updated based on frequency}

Advantages :-

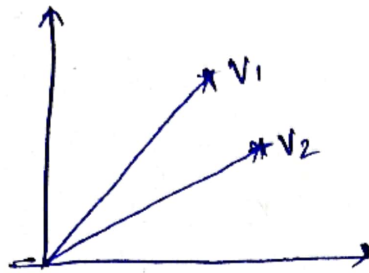
- Simple and Intuitive
- fixed sized I/P \rightarrow ML Algorithm Apply the stuff!!

Dis Advantages

- ① Sparse Matrix \rightarrow Overfitting
- ② Ordering of the word is getting changed.
- ③ Out of Vocabulary (OOV)

④ Semantic meaning is not getting captured.

ent \rightarrow The food is Good $\rightarrow [1 \ 1 \ 1 \ 0 \ 1]$
 \rightarrow The food is not Good $\rightarrow [1 \ 1 \ 1 \ 1 \ 1]$ } \Rightarrow Sentences are almost similar.



example :-

$S_1 \rightarrow$ I love cricket

$S_2 \rightarrow$ I love football.

Vocab Vocabulary	love	cricket	football
Frequency	2	1	1

	I	love	cricket	football	O/P
$S_1 \rightarrow$	1	1	1	0	1
S_2	1	1	0	1	1

Simple Means :- "Bag of words ek model hai jo Text ko words ki frequency ke basis per numbers me convert karta hai taki ML Algorithm use samjh ske !! #