

# Calculation

## Bag of Words (BOW)

	Analyze	Best	Computer	course	data	important
T <sub>1</sub>	0	0	1	0	1	1
T <sub>2</sub>	1	0	1	1	1	1
T <sub>3</sub>	1	0	0	0	2	0

	one	science	scientest
T <sub>1</sub>	0	2	0
T <sub>2</sub>	1	1	0
T <sub>3</sub>	0	0	1

## Term Frequency Table

	Analyze	Best	Computer	Course	data	important
T <sub>1</sub>	0/7	0/7	1/7	0/7	1/7	1/7
T <sub>2</sub>	1/9	0/9	0/9	1/9	1/9	0/9
T <sub>3</sub>	1/4	0/4	0/4	0/4	2/4	0/4

one Science Scientist

1	0/7	2/7	0/7
2	1/9	1/9	0/9
3	0/4	0/4	1/4

## Inverse Document Frequency Table

	IDF values
analyze	1.69
Best	1.69
computer	1.69
course	1.69
data	1
important	1.69
one	1.69
Science	1.28
Scientist	1.69

## TF-IDF Table

	Analyze	Best	Computer	Course	data	important
T <sub>1</sub>	0.260	0	0.446	0	0.26	0.446
T <sub>2</sub>	0	0.48	0	0.483	0.285	0
T <sub>3</sub>	0.51	0	0	0	0.610	0

## one science Scientist

T <sub>1</sub>	0	0.679	0
T <sub>2</sub>	0.48	0.3677	0
T <sub>3</sub>	0	0	0.516802

## Cosine Similarity table :-

	T <sub>1</sub>	T <sub>2</sub>	T <sub>3</sub>
T <sub>1</sub>	1	0.40	0.241
T <sub>2</sub>	0.40	1	0
T <sub>3</sub>	0.24	0.2615	1

## Manhattan distance table

	T <sub>1</sub>	T <sub>2</sub>	T <sub>3</sub>
T <sub>1</sub>	0	2.69	2.99
T <sub>2</sub>	2.69	0	3.19
T <sub>3</sub>	2.9	3.1	0

## Euclidean distance

	$T_1$	$T_2$	$T_3$
$T_1$	0	1	1
$T_2$	1	0	1.21
$T_3$	1.2	1.2	0