Variants of Naive Baye's

1. Bernoulli Naive Bayes
2. Multinomial Naive Bayes
3. Gaussian Naive Bayes

1. Bernoulli Naive Bayes

Whenever your features are following a Bernoulli Distribution, then we need to use Bernoulli Naive Baye Algorithm.

Dataset

Bernoulli → 0, 1

When outcome will 0 or 1;

f1	f2	f3	O/P
Yes	Pass	Male	Yes
Yes	Fail	Female	No
No	Pass	Male	Yes
Yes	Fail	Female	No

2. Multinomial Naive Bayes ⇒ I/p = Text

When your i/p data is in text & it is classification problem, use it.

Datasit : Spam classification

I/P feature	O/P
Email Body	Spam/Not Spam
You have Million $$ lottery	Spam
KRISH YOU HAVE DONE GOOD JOB	HAM

Convert sentences into Numerical Values

By ⇒ Natural Language Procuning

Vectors

① BOW

② Tf-Idf

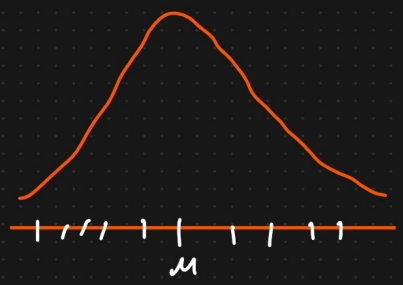
③ Word2vec

③ Gaussian Naive Bayes

If the features are following Gaussian Dismbution, then we use Gaussian Naive Bayes

DATASET → CONTINUOUS Feature

IRIS Dataset



Age	Height	Weight	Yes/No
25	170	78	
38	160	75	
22	150	60	
24	170	35	