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.

Bernoulli → 0, 1

Dataset

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

Dataset : Spam Classification

I/P feature → Email Body	O/P Spam/Not Spam
You have Million $$ lottery	Spam
KRISH You have done Good JOB	HAM

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Numerical Values ⇒ Natural Language Procesing

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Vectors

① BOW

② Tf-Idf

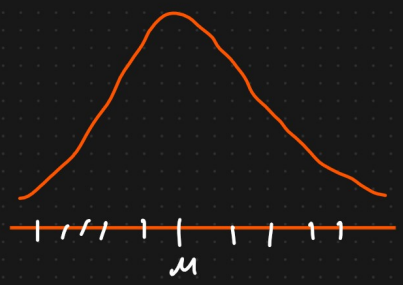
③ Word2vec

③ Gaussian Naive Bayes

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

DATASET → CONTINUOUS

IRIS Dataset



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