

⑩ Gaussian Naive Bayes - Handling Continuous valued features :

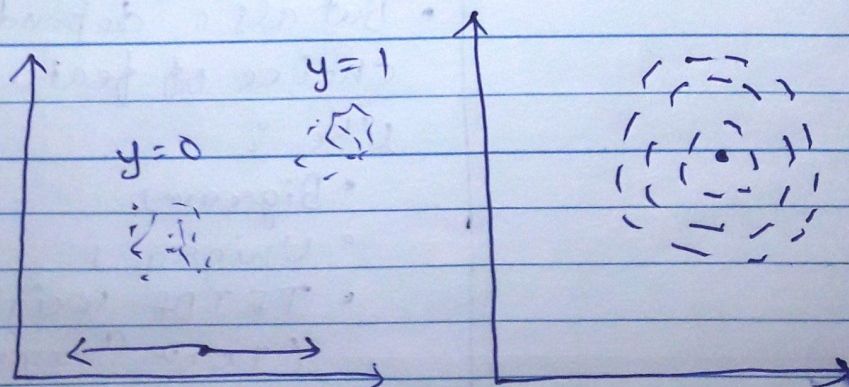
Types of Naive Bayes :

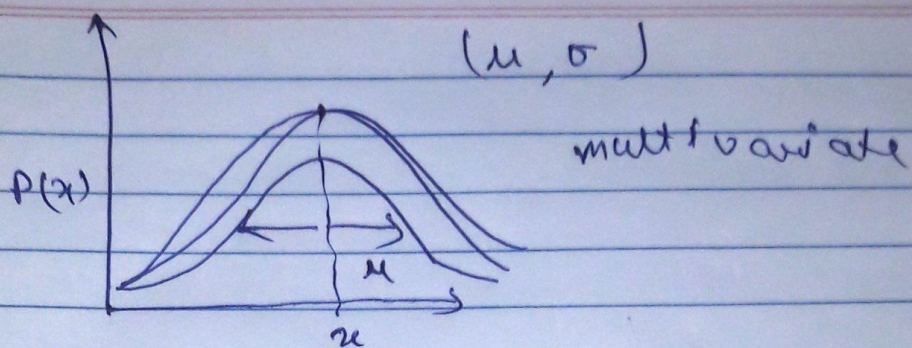
- ① Multivariate Bernoulli event NB $n = \{0, 1\}$ (Boolean) Discrete features
- ② Multinomial NB (Multiple different values) $m = \{1, 2, 3, 10\}$
- ③ Gaussian NB (Continuous valued feature)

$n = \{ 2.5$
 2.67
 2.78
 2.92
 \vdots
 $3.5 \}$

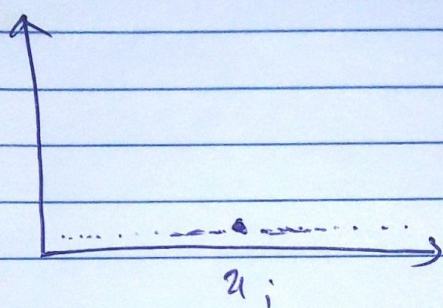
$$P(x_i | y=1)$$

$$= \frac{1}{\sqrt{2\pi} \sigma} e^{-\frac{(x-\mu)^2}{2\sigma^2}} \leftarrow \text{univariate}$$





1-D Case



Normal distribution (μ, σ)