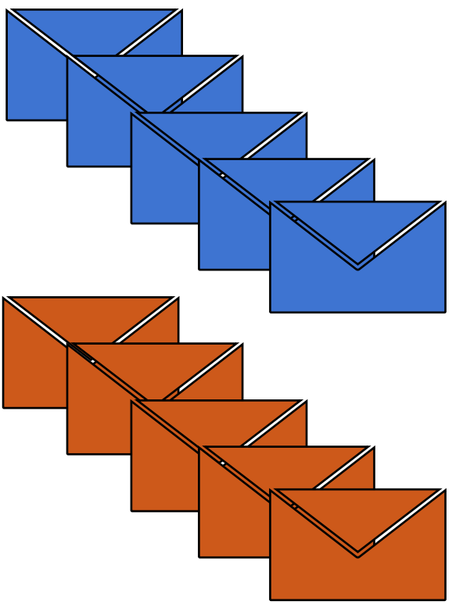
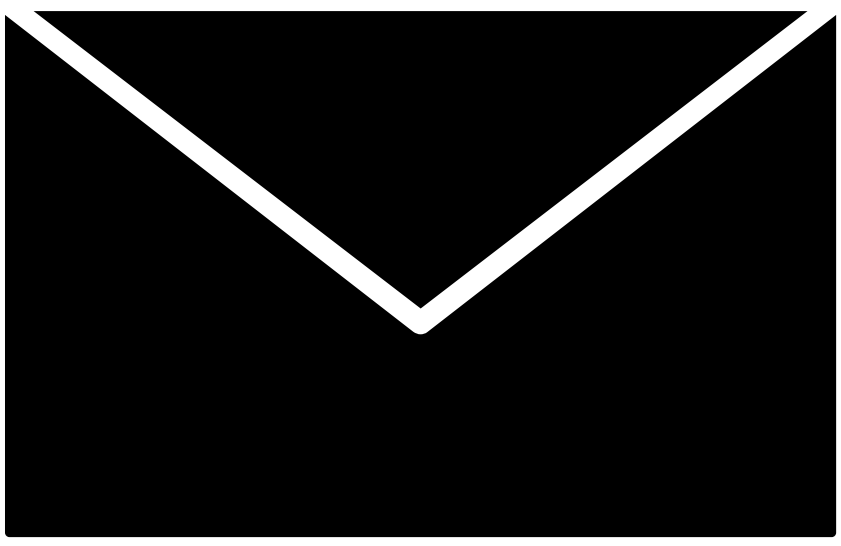
Naive Bayes

$$P(\text{category} \mid x_1, x_2, \ldots, x_p) \propto \prod_{i=1}^{p} P(x_i \mid \text{category}) \cdot P(\text{category})$$

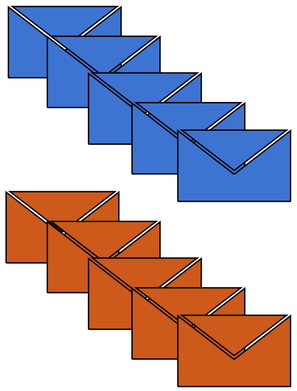


spam	dear	lunch	viagra	money
0	0.25	0.46	0.01	0.14
1	0.32	0.05	0.53	0.67



[1,1,0,0]

Naive Bayes



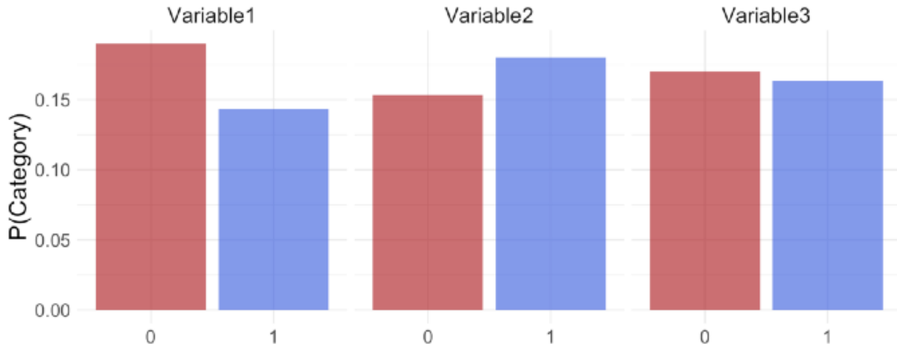
spam	dear	lunch	viagra	money
0	0.25	0.46	0.01	0.14
1	0.32	0.05	0.53	0.67

$$P(\text{category} \mid x_1, x_2, \ldots, x_p) \propto \prod_{i=1}^{p} P(x_i \mid \text{category}) \cdot P(\text{category})$$

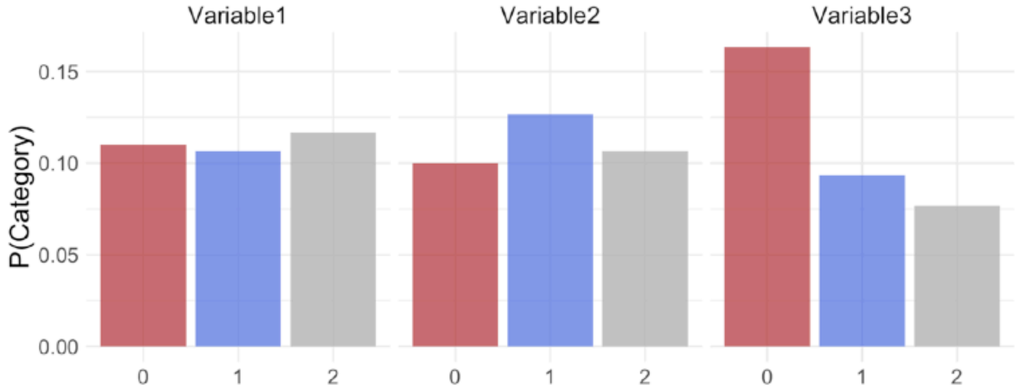
 $[1,1,0,0]$

Naive Bayes

Bernoulli Naive Bayes



Categorical Naive Bayes



Gaussian Naive Bayes