We can convert categorical variables into numeric form with one of two methods:

1. Label encoding: here we simply convert each category into an integer
2. One hot encoding: here we look at the number of total categories possible and convert them into vectors.

Suppose we have

+1 A
+1 A
+1 A
-1 B
-1 B
-1 A

Label encoding: A → 1, B → 2

One hot encoding A → (1,0), B → (0, 1)

Thus while one hot encoding increases dimensionality it also gives better signal and likely to be more accurate.