Data Drift

$$P_{train}(x, y) \neq P_{test}(x, y)$$

Difference in the joint distribution of the inputs and outputs between the training and test datasets.

Covariate Drift

$$P_{train}(x) \neq P_{test}(x)$$
$$P_{train}(y|x) = P_{test}(y|x)$$

Change in distribution of independent variables (inputs)

Concept Drift

$$P_{train}(x) = P_{test}(x)$$
$$P_{train}(y|x) \neq P_{test}(y|x)$$

Change in underlying relationship between inputs and outputs

Prior Probability Drift

$$P_{train}(y) \neq P_{test}(y)$$
$$P_{train}(x|y) = P_{test}(x|y)$$

Change in distribution of target variable (output)