

<https://www.simplilearn.com/tutorials/statistics-tutorial/difference-between-probability-and-likelihood>

The term "probability" refers to the possibility of something happening.

The term Likelihood refers to the process of determining the best data distribution given a specific situation in the [data](#).

When calculating the probability of coin getting heads, you assume that $P(\text{head}) = 0.5$

However, when calculating the likelihood, you are trying to find if the model parameter ($p = 0.5$) is correctly specified or not.

<https://medium.com/swlh/probability-vs-likelihood-cdac534bf523>

Probability corresponds to finding the chance of something given a sample distribution of the data, while on the other hand, Likelihood refers to finding the best distribution of the data given a particular value of some feature or some situation in the data.

The likelihood in very simple terms means to increase the chances of a particular situation to happen/occur by varying the characteristics of the dataset distribution.

$P(x/y)$

$L(y/x)$

Probability: her şey sabit

$$P(\text{height} > 170\text{cm} | \mu = 170, \sigma = 3.5)$$

Calculating Probability [Image by Author!]

Likelihood: soldaki değer sürekli değişip sağ hangisine en çok uyuyor hesabı

$$\text{Likelihood}(\mu = 170, \sigma = 3.5 | \text{height} > 170\text{cm})$$

Likelihood calculation [Image by Author!]