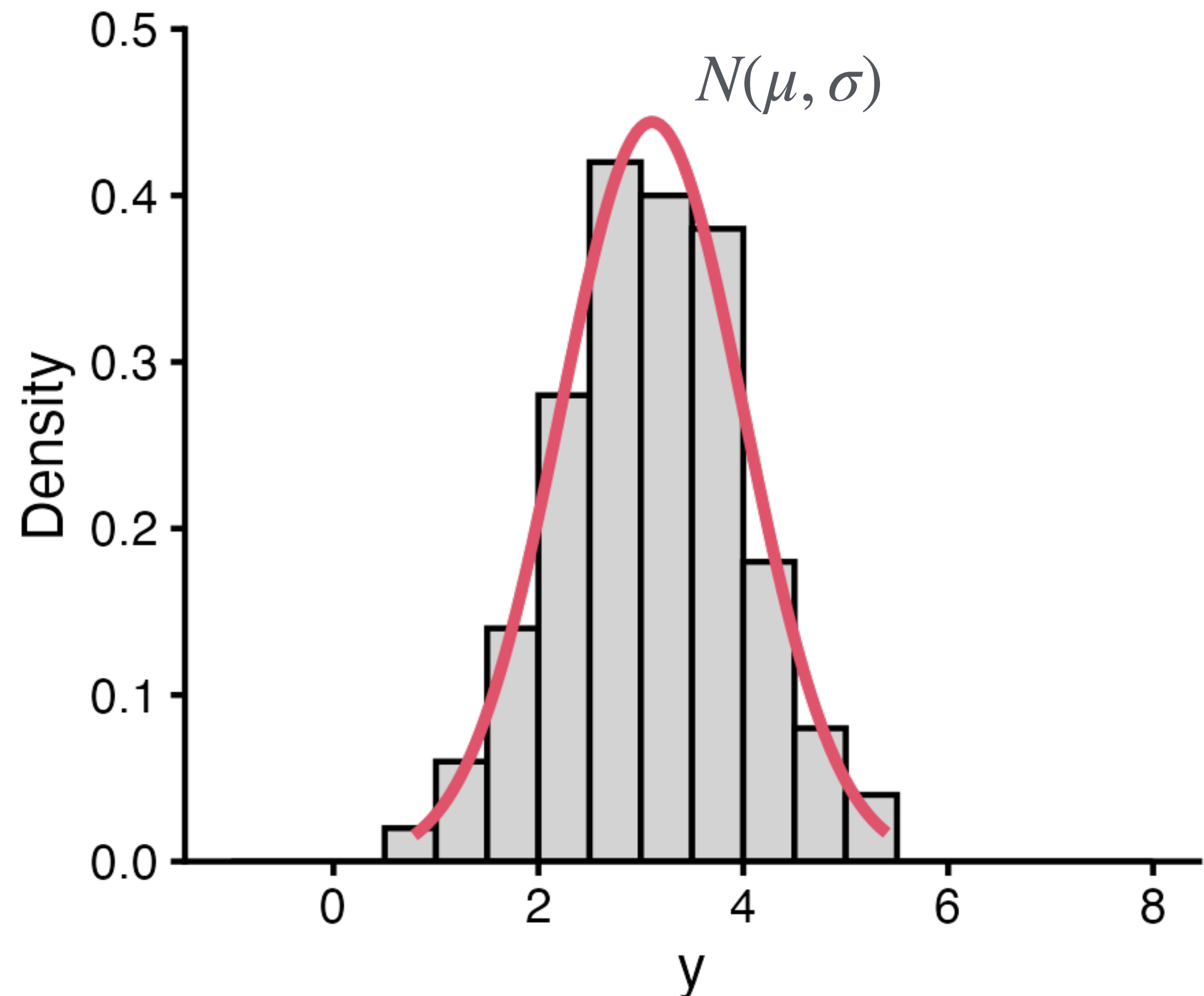


# Simplest probabilistic model

Fit parameters to a set of measurements

- Measure a set of  $y_i$  values:
- Find the “best fitting” normal distribution by choosing  $\mu$  and  $\sigma$  such that the  $N(\mu, \sigma)$  distribution approximates the histogram of the  $y_i$  values

$$y_i \sim N(\mu, \sigma)$$



# The likelihood

The probability of each value of  $y$

- What does this mean?

$$y_i \sim N(\mu, \sigma)$$

- We can also write this as:

$$P(y | \mu, \sigma)$$

The likelihood of  $y$

