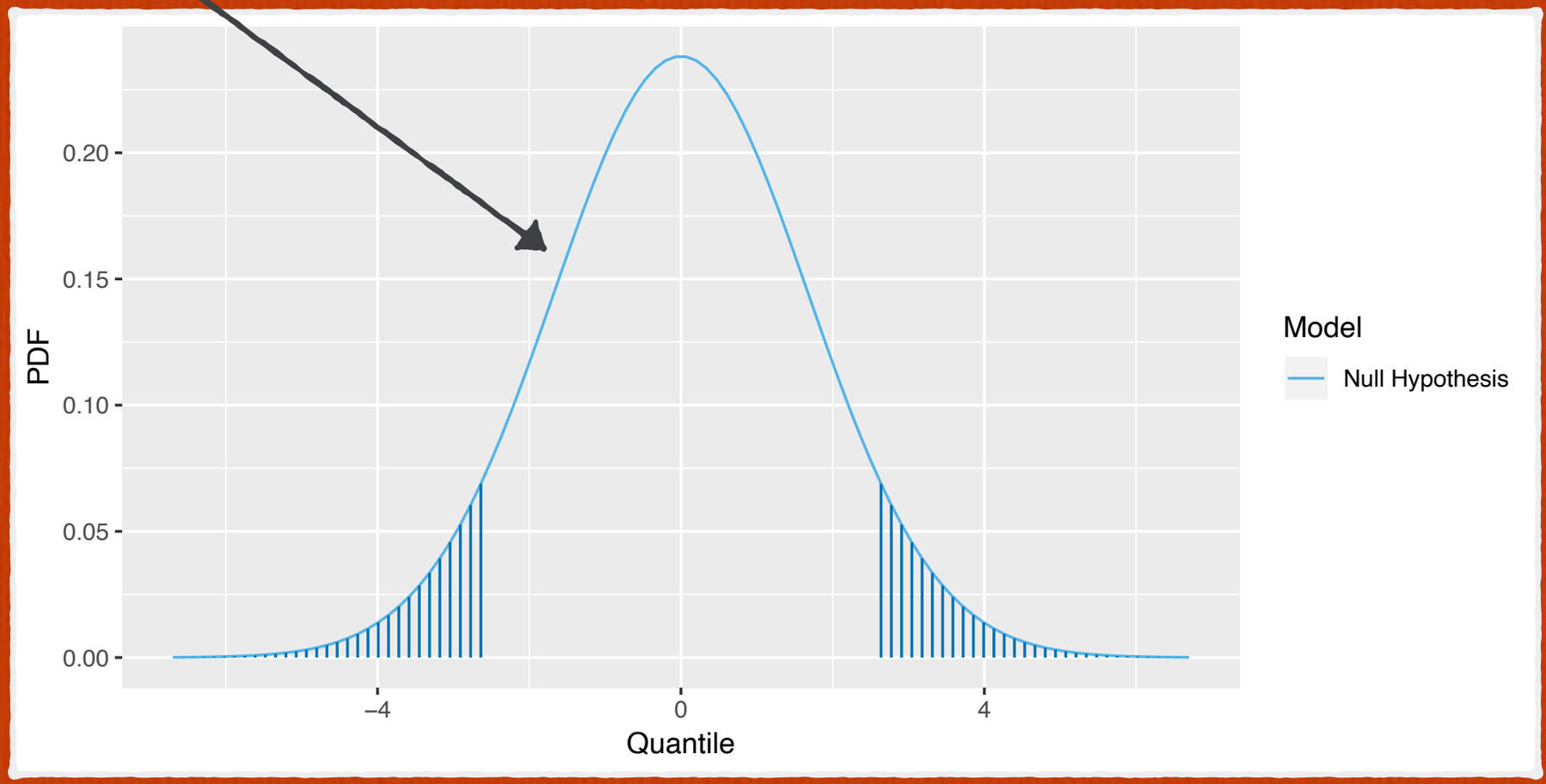
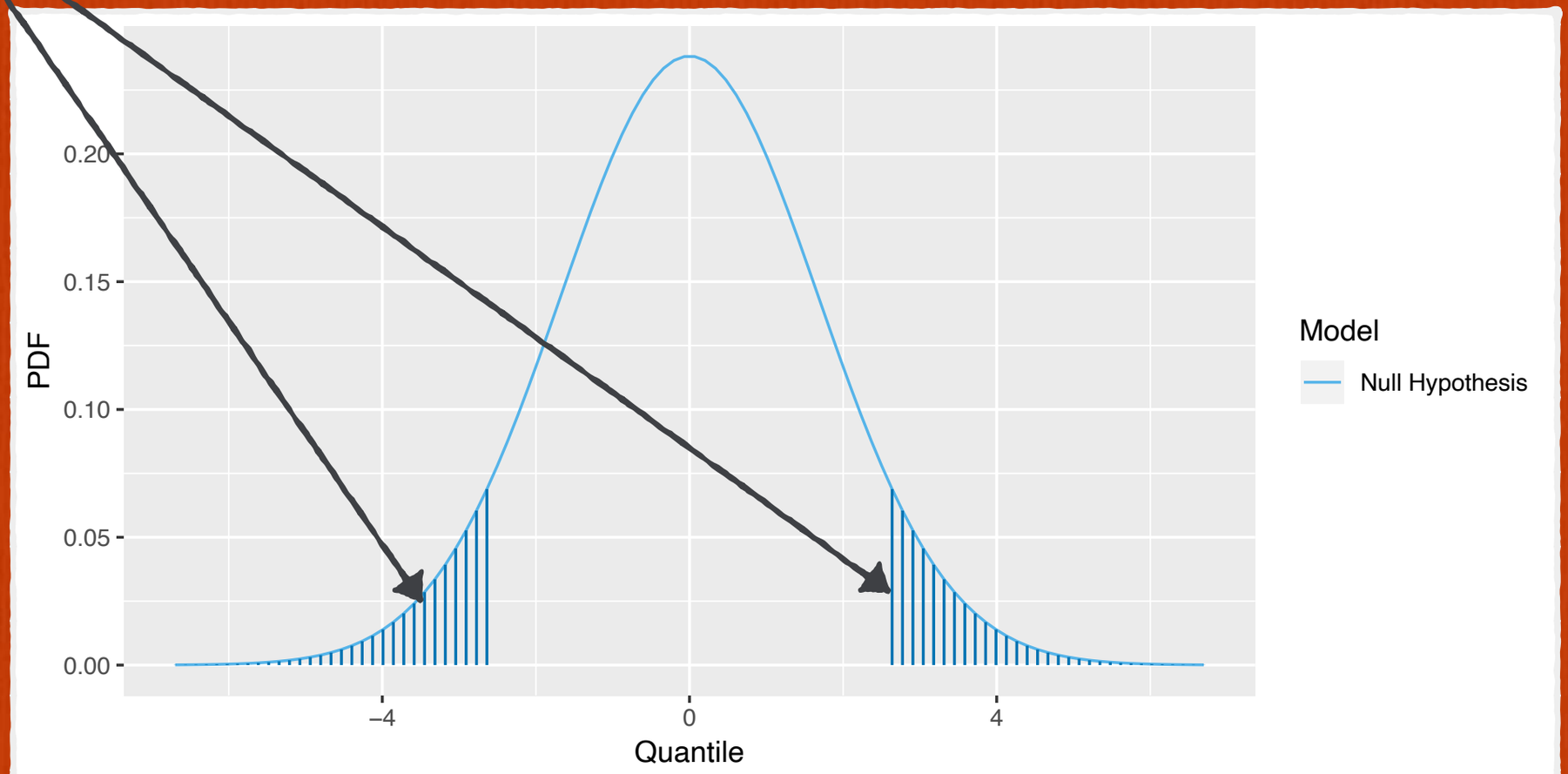
$$f\left(y \mid \mu_0 = 0, \sigma^2 = \hat{\sigma}^2\right)$$



Probability vs Likelihood

The null hypothesis asserts that μ is (axiomatically) 0, but σ^2 can take it's maximum likelihood estimate

$$p\left(|y| > \hat{\mu}\,|\,\mu_0 = 0, \sigma^2 = \hat{\sigma}^2\right)$$



Probability vs Likelihood

We determine a p-value by integrating the area corresponding to values extreme than the maximum likelihood estimate