

$$\hat{\mu} = \frac{1}{n} \sum_{i=1}^n x_i \quad \text{np.mean}(x)$$

$$\hat{\sigma} = \sqrt{\frac{1}{n} \sum_{i=1}^n (x_i - \bar{x})^2} \quad \text{np.std}(x)$$

$$S = \sqrt{\frac{1}{n-1} \sum_{i=1}^n (x_i - \bar{x})^2} \quad \text{np.std}(x, \text{ddof}=1)$$

$$\text{CI: } \bar{x} \pm t_{\alpha/2, n-1} \cdot \frac{S}{\sqrt{n}}$$

$$t_{\alpha/2, n-1} = \text{scipy.stats.t.ppf}(1 - \alpha/2, n-1)$$