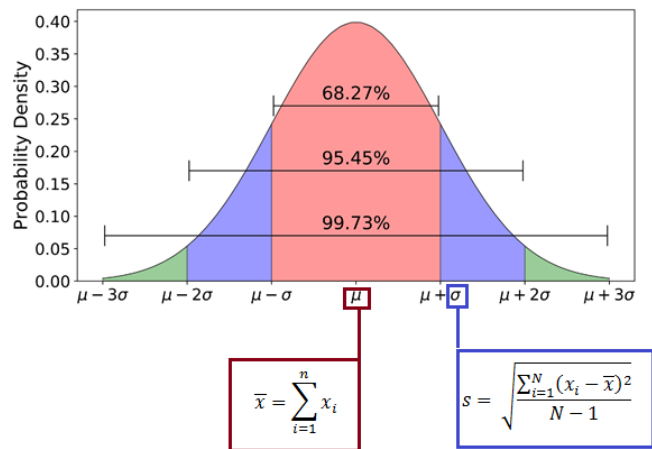


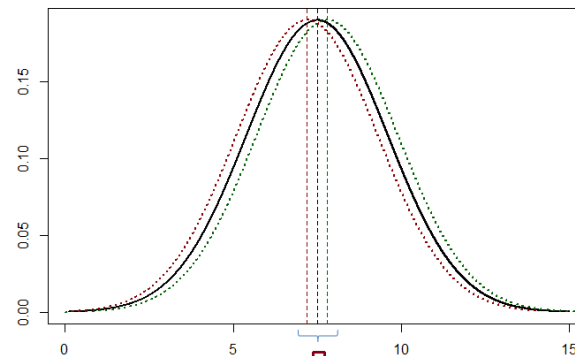
Statistics 101

Data type	Distribution	Parametric	Central tendency			Deviation measures			Correlation	Comparison	Difference	
			Mode	Median	Mean	Range	IQR	Std.Dev			1-sample	2-sample
Nominal	--	No	Yes	No	No	No	No	No	--	--	--	--
Ordinal	--	No	Yes	Yes	No	Yes	Yes	No	Spearman	Chi-square	Sign test, Wilcoxon	Mann-Whitney
Interval	Normal	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Pearson	--	t-test	t-test
	Other	No	Yes	Yes	No	Yes	Yes	No	Spearman	--	Sign test, Wilcoxon	Mann-Whitney
Ratio	Normal	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Pearson	--	t-test	t-test
	Other	No	Yes	Yes	No	Yes	Yes	No	Spearman	--	Sign test, Wilcoxon	Mann-Whitney

Normal Distribution



Sample vs Population – Confidence intervals



Confidence level	Z value
90%	1.65
95%	1.96
99%	2.58
99.9%	3.291

$$SE_{\bar{x}} = \frac{s}{\sqrt{n}}$$

$$CI_{\bar{x}} = \bar{x} \pm z_{1-\alpha/2} * SE_{\bar{x}}$$

A diagram showing a confidence interval on a number line. A central point represents the sample mean \bar{x} . Two vertical bars, one red and one blue, extend from the center, representing the lower and upper bounds of the confidence interval. Dashed lines connect the center to the boundaries of the bars.