Testing hypothesis for ONE population: lab6, lab7

Testing hypothesis for mean – sigma unknown:

t.test(x, mu\_0=4, alternative = "greater", conf.level = 1 - alpha) , where mu\_0 – comparable mean

Testing hypothesis for fraction:

prop.test(T, n, p=p0, alternative = "less", conf.level = 1 - alpha), where p0 – percent of smth, T – testing sample

Testing hypothesis for mean – sigma known:

z.test(x, stdev=5, mu0=870, alternative = "two.sided", conf.level = 1-alpha), where stdev – sd, mu\_0 – comparable mean

Testing hypothesis for variance:

sigma.test(x, sigmasq = 0.05, alternative="two.sided", conf.level=1-alpha)

Testing hypothesis for TWO populations: lab8

1 step: Check homogeneity of variance (sigma1^2 = sigma2^2 or not):

var.test(a1, a2, alternative = "two.sided", conf.level = 1 - alpha)

2 step: Test hypothesis:

(for ex. of testing mean): t.test(a1, a2, var.equal = TRUE, alternative = "greater", conf.level = 1 - alpha),

Where var.equal = TRUE if sigma1^2 = sigma2^2 and FALSE if sigma1^2 != sigma2^2

AOV: lab9

1 step: Check homogeneity of variance (more than two populations):

bartlett.test(values~names)

2 step: Equality of the mean (if mu1\_2 = mu2\_2 = mu3\_2 or not):

summary(aov(values~names))

3 step: Check difference between populations:

TukeyHSD(aov(values~names))

Linear Regression: lab10

Multiple Regression: lab11

Fit and Chi-square test: lab12

chisq.test(observed, p=expected …)