General linear models and nonparametric alternative tests

Trend analysis

Continuous

Continuous

Differences between samples

2 samples

Continuous

Categorical

	Parametric	Nonparametric
Dependent Data	Paired t-test	Paired Wilcoxon test
Independent data	t-test	Wilcoxon test U-test
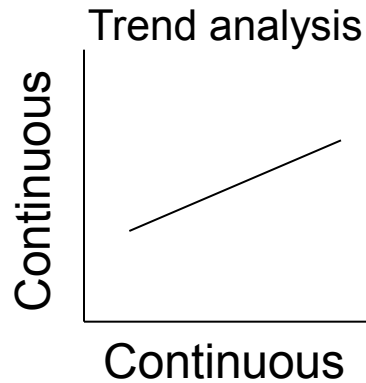
|	Parametric	Nonparametric
Unknown relationship	Pearson correlation	Spearman correlation
Causal relationship	Linear regression	Spearman correlation (Nonparametric regression)

> 2 samples

Continuous

Categorical

Dependent data	ANOVAR	Freidman test
Independent data	One way ANOVA	Kruskal-Wallis test

Pair wise comparisons among all categories - Post-hoc test

Two or more explanatory variables

Continuous and categorical variables

Continuous

Continuous
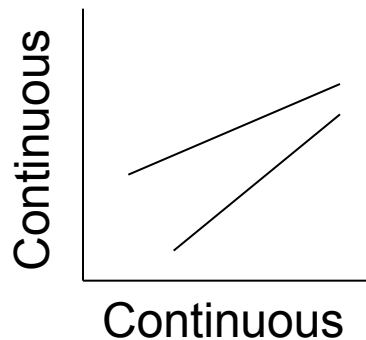
ANCOVA

Two or more categorical variables

Continuous
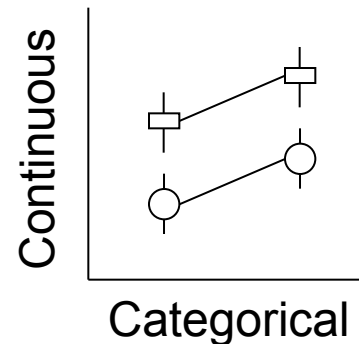
Categorical

Two way ANOVA

Note! If $p < 0.05$ then reject H_0

Generalized linear models and χ^2 test

Trend analysis
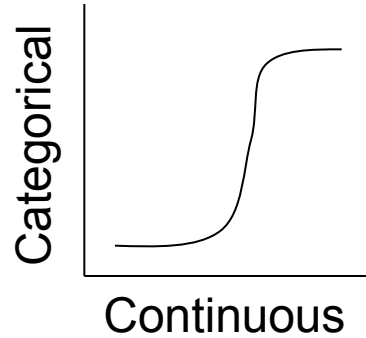
Differences between samples

Trend analysis

Categorical

Continuous

	0	1
A	34	52
B	14	38

Categorical (column header)

Categorical (row label)

Logistic regression

Chi-square test
Logistic regression