

1 | **multivariate analysis**

1.1 | **terms**

1.1.1 | **null hypothesis**

1.1.2 | **dependence - if one set of variables can predict another**

1.1.3 | **interdependent analysis - intercorrelations for underlying understanding**

1.1.4 | **metric vs non metric - a metric variable is numeric**

1.2 | **then a bunch of methods for dependence analysis**

1.2.1 | **pick by matching which ones match your input/output variable types and numbers**

1.3 | **interdependent multivariate analysis**

1.3.1 | **factor analysis**

1. understand which variables highly correlate to others
 - (a) common factor analysis - extracts factors that correlate
 - (b) principal component analysis - extract factors that have the largest impact
2. cluster analysis
3. multidimensional scaling
 - (a) obtain tabular data from a weighted graph structure?
4. corresponding analysis
 - (a) like factor analysis or something?

1.4 | **important matrices**

1.4.1 | **data matrix**

1.4.2 | **USSCP**

1. data matrix multiplied by the transpose

1.4.3 | **some other thing CSSCP**

1.4.4 | **covariance matrix (C)**

1.4.5 | **correlation matrix (R)**

1. variables normalized for mean 0 and stddev 1

1.5 | **applications**

1.5.1 | **lots of fields**