

Stats - basic concepts



Week 01 - Day 05

Sample

Vs.

Population

Descriptive statistics (this DSI batch)

Vs.

Inferential statistics (polls)

Estimate

Statistics = $f(\text{data}) = f(\text{sample})$

Vs.

Parameters = fixed (population)



Simple (random) Sample

Vs.

Stratified (random) Sample

Univariate analysis

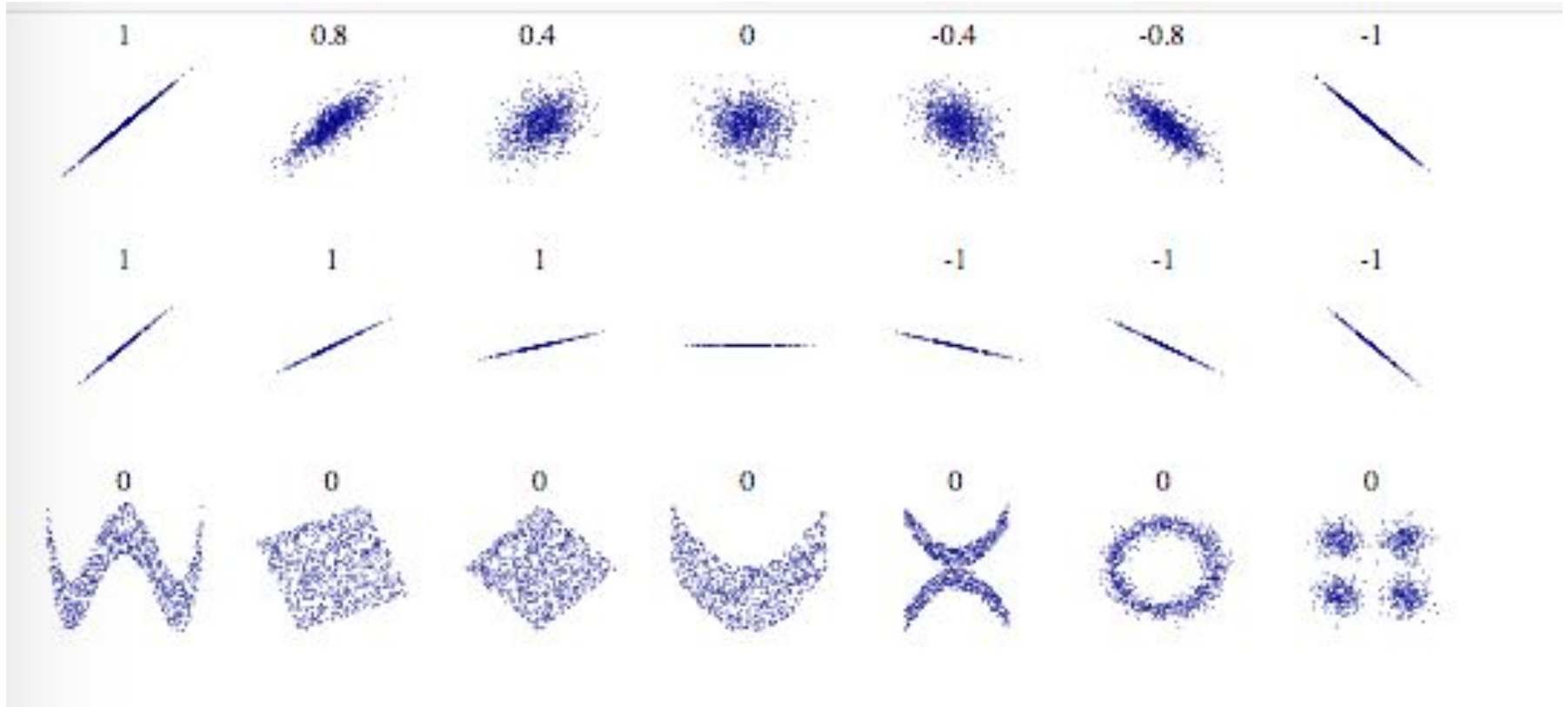
Vs.

Bivariate analysis

Vs.

Multivariate analysis

(linear) Correlation



(linear) Correlation

(play the game)

Pearson's Correlation

([wiki](#) + excel file)

Spurious correlations

(original link - currently broken)

“In a study published by the American Journal of Epidemiology, researchers found in a sample size of 2,682 men in Finland, those who donated blood a minimum of once a year had an 88 percent lower risk of heart attacks than those who did not donate.”

Correlation \neq Causation

[\(video\)](#)

Correlation

Vs.

Covariance