The Data-Shack workshop: W1. Introductory analytics (2 days)

(Analytics foundations & simple relations) - **Bring your own data and business questions ("points of pain") and we'll teach you the analytics**

Prerequisite

None.

Preparation

At least 2 weeks prior to workshop date, the following are required:
- payment in full
- business "points of pain" to be addressed
- clean data to confirm applicability

Objectives

Using your own data, introduce delegates to:
- essential concepts in statistics which are the foundation of most statistical tests
- descriptive statistics and how to describe data
- quantifying relations between continuous and categorical variables

Description

This two-day workshop is designed to instruct the student on how to take advantage of the various statistical tools to characterise data and subsequently explore relations between continuous and categorical data in Statistica.

Using your own data to answer your own "points of pain", delegates are advised as to best practice in their analytics endeavours.

Students that have not used Statistica will be guided on how best to utilise the software.

Outcome

Delegates will leave the workshop with a PDF report of their analysis, enabling them to return to work with insights and an actionable plan.

Topics*

1. Essential concepts in statistics
2. Working with Statistica
3. Descriptive statistics for continuous variables
   3.1. Measures of location
   3.2. Measures of variation
   3.3. Measures of distribution shape
   3.4. Measures of ranges
   3.5. Assessing normality
4. Relations between continuous variables
   4.1. Correlations
5. Relations between categorical variables
   5.1. Frequency tables
   5.2. Cross tabulation
   5.3. Chi-square test
6. Relations between continuous and categorical variables
   6.1. t-tests
   6.2. Breakdown tables
   6.3. One-way ANOVA
7. Analysis of non-normal data (nonparametric methods)
   7.1. Nonparametric descriptive statistics
   7.2. Comparing 2 independent samples
   7.3. Comparing 2 dependent samples
   7.4. Comparing multiple independent samples

* Note that the list of topics covered may vary slightly depending on the nature of the business questions to be answered, and the content of the supporting data supplied by the delegates

Timing

08h30	Welcome, coffee, Statistica installation
09h00	Session 1
10h30	Tea/coffee/emails/phone break
11h00	Session 2
12h30	Lunch/emails/phone break
13h15	Session 3
14h45	Tea/coffee/emails/phone break
15h00	Session 4
16h30	End