Data Analysis with R (I): Data Visualization

R is an open source statistical platform widely used in social science research and other research areas. This course will introduce participants to the basics of R and some fantastic graphics techniques. It covers practical issues in data analysis and visualization such as reading data into R, calculating various descriptive statistics, writing simple R functions, and exploring and visualizing data. The course uses a range of real data examples (e.g. Figure 1) to illustrate how R is an ideal platform for the analysis and visualization of social and other-type data.

Figure 1: Scatter plots of highway miles per gallon (hwy) vs engine displacement, in litres (displ) of the fuel economy data from 1999 and 2008 for 38 popular models of car, according to the year of car manufactures (year=1999, 2008) and the number of cylinders (cyl). The fitted lines (solid) are superimposed in each setting.

Course Outline
- Introduction to R (data types, data import and export etc.)
- Description statistics (mean, median, standard deviation etc.)
- Simple graphics (scatter plots, boxplots, etc.)
- Graphics using qplot (Quick plot)
- Wide range multi-layer plots using ggplot2 R package.

Who Should Attend
This course is designed for:
- Individuals with some basic statistics background and would like to learn the powerful open source statistical platform R;
- Individuals with no programming background and would like to learn how to program data;
- Individuals who would like to learn other advanced courses such as multilevel modeling and structural equation modeling offered.

Dr. Zhang joined NUS at the end of 2000 and he has taught a number of modules, including Regression analysis, Generalized linear regression, Nonparametric regression, Categorical data analysis, Computer aided data analysis, Computer intensive data analysis, and Bayesian statistics among others.
**Prerequisites**
Participants are expected to have some basic knowledge in statistics and it would be very helpful if they know some statistical packages such as SPSS, SAS or STATA among others.

**Enquiries**
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*For details on schedule, course fee & registration, visit CFPR website.*