Dr. Haug Leuschner

DHL Data Science Seminare GmbH

„Descriptive Statistics with R"

a Basic Training Workshop for Beginners

Day 1: 14th May and Day 2: 04th June 2021
each day 8-12am + 1-5pm

The two-day introductory course introduces the basic functions of R and RStudio (with data import, data preparation and basic programming techniques) and teaches the use of descriptive statistics and graphics with R and RStudio. In the course, a clinical efficacy study of two drugs will be used as an exercise data set.

Day 1: Introduction to data processing with R

Basic functions of R and RStudio
- Install and use R packages
- Workspace and Global Environment
- Variables and data types
- Vectors, matrices and data frames
- Create and manage projects
- Develop and test R scripts

Data import / export and data preparation
- Import and export data
- Transform and recode data
- Create categorical variables

Day 2: Introduction to descriptive statistics with R

Programming techniques
- Select data and create subsets
- Create custom functions
- Best practice for custom functions

Univariate Descriptive Statistics
- Central tendency, dispersion measures, and frequency distributions
- Frequency tables and crosstabs
- Tables with descriptive parameters
- Bar charts, pie charts, histograms and box plots with R Graphics

Bivariate Descriptive Statistics
- Correlations (Pearsons r, Spearmans Rho)
- Scatter plots with R Graphics

Lecturer profile
From 2001 to 2013, the lecturer Dr. Haug Leuschner taught statistics for several courses at the Faculty of Human Sciences at the University of Cologne and was involved in the statistical analysis of numerous research projects at the University of Cologne, including in cooperation with the University Hospital of Cologne. Dr. Leuschner has published several scientific publications in the field of social cognition and medicine in German and international journals. In his doctoral thesis he devoted himself to the development of a computer-aided collection method for communication data in order to make them accessible for statistical analyzes. Since 2014 he has headed a training institute for statistics courses.