Formation R - Data manipulation and elementary statistics in Geneva, Zurich, Huston, San-Antonio, Dallas, Los Angeles, San Diego, New York, Washington, Chicago, San Francisco and anywhere in Switzerland, USA, Great Britain and Germany.

ID : 1026

Goal : The goal of this course is to practice with R the use of various mathematical techniques for the analysis of times series data and do forecasting. Will be seen in the course the most known techniques in the world (not exceeding the level of a university Master) considered as a base in the field of business economics, governments investment strategies or actuarial. No maths will be done or explained during this course (you can request the corresponding theoretical course).

Audience : Managers, economists, engineers, financial analysts, auditors, actuaries, executives and forecasters or other profile having to do statistical analyzes as part of their work and wishing to avoid creating formulas or macros in a spreadsheet software.

Prerequisites : Have followed the course R on foundations, charts, parametric and nonparametric statistics or have equivalent knowledge (+strong theoretical knowledge in statistics). The trainee must also have the ability to represent mentally simple and complex mechanisms process. Since the course includes demonstration and hands-on use of a software, participants should master file management in MS Windows/Linux/Mac based personal computer.

Goals :

- Introduction
- Generating a time series from raw data
- Extract sub-set of a time series
- Read time stamp data
- Statistical analysis
- Decomposition of a time series using additive or multiplicative model
- Sequence test (Walf-Wolfowitz test)
- Control of stationarity
- Filtering
- Moving average filter
- Simple exponential smoothing filter
- Holt and Winter's exponential filter (multiplicative model)
- Best forecasting model in the sense of errors
- Autocorrelation
- Autocorrelation coefficient
- Partial autocorrelation coefficient
- Univariate AR, ARIMA, ARCH, GARCH models
- AR(p) and ARIMA(p,0,0)
- ARIMA(0,0,0) and moving average
- ARIMA(0,1,0)
- ...

Pedagogical method : The training is based on small practical exercises based on the training book.

Suggested duration for presentiel training (days) : 2
Suggested duration for on-line training (days) : 2.4

Daily price in face-to-face : 625 CHF
Daily price in remote : 300 CHF
Daily price in remote for students : [contact](#) us (only if student card!)
Daily price in remote (with recording) : 3125 CHF
Prices are per day per trainee without course material, without certificate, without evaluation, without exam, without training room or computer (these are each optional and must be requested in addition in the contact form for the establishment of the quote).

Book

- **Title :** *R - La Bible en images et en couleurs*
- **Author(s) :** *Vincent Isoz*

- **Pages :** *2400*
- **ISBN :**

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