Training:
A selection to get your
Data Scientist started

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Data Scientist: Why? Who? How?

“Big data”, everyone knows, is more than a buzz word. It refers to data that is too voluminous, too unstructured, or from too many diverse sources to be managed and analyzed through traditional means.

Related to this is the concept of “High Performance Analytics” (HAP): to adequately access and analyze data, new methods and technologies are needed.

To succeed, companies need employees who are capable to look for the business problem that has the most value for the organization, analyze all sorts of data sources with advanced techniques, and interpret the results to enable management to take future proof decisions.

In other words, companies need data scientists to do the day-to-day work of big data management and analysis.

What profile are you looking for?
The data scientist is a multifaceted role that leans heavily on creativity in areas such as business acumen, statistics and programming.

Characterizing competencies of a real data scientist are:
- Finds and interprets rich data sources
- Performs advanced analytics
- Knows how to take advantage of available hardware and software
- Has strong visualization skills
- Communicates adequately findings to different audiences: Data Scientist, Field Specialists, IT, Management...

To get there, the data scientist needs to learn to master different aspects, such as:
- Build a solid basis in mathematics, statistics, analytics, modeling...
- Look for state of the art techniques to analyze data
- Learn to use relevant software efficiently to get the most out of research
- Become a performant communicator who gets the message to different audiences

As data management and analysis touch the core of the SAS’ offering, we are very aware of the need of this profile in the market. That’s why we have extended our standard training offering on programming, data management and statistical analysis with a selection of courses for the data scientist.

You can find all courses on our website: SAS Training in Belgium
Details on specific training for the data scientist are given on the next pages.
A Spectrum of opportunities

At SAS, we provide a number of opportunities for you to gain the knowledge to be reliable in your role. For many years SAS offers a wide spectrum of **programming, data management** and **analytics courses**. You can find them on our [SAS Public Training](http://www.sas.com) website, more specifically look for the “Data Scientist” and “High Performance Analytics” course lists.

However, you may not have been aware of **a particular series that can really “supercharge” your skills beyond our traditional offerings:**

Our [Business Knowledge Series](http://www.sas.com) (BKS) courses have been around for more than a decade, and are designed to address critical issues surrounding business analytics in a variety of fields.

**Specifically for the Data Scientist**, we have selected classes designed to supply valuable information on business practices, concepts, methodology and techniques, with an expert available to help you in your sphere of action.

External professionals and SAS Customer Training form a unique partnership to bring their real-world knowledge directly to you. You will discover that the courses are authored by respected practitioners who use SAS to solve common business problems.

Here are some of the new and upcoming courses for the data scientist to help him/her get ahead.

Brief course outline on the following pages.

**Get your Data Scientist started**

- **Strategies and Concepts for Data Scientists and Business Analysts**
  3 days classroom training
- **Value Dynamics for Data Scientists: How to Generate and Deliver Value with Analytics to non-experts?**
  2 days classroom training + 2 individual coaching sessions
- **Data Preparation and Data Quality for Analytics**
  2 days classroom training
- **Advanced Analytics in a Big Data World**
  e-learning (equivalent of 3 days classroom training)
Business Knowledge Series:
Data Preparation and Data Quality for Analytics

How to build powerful data marts for analytical modeling and data science in an efficient way?

2016 planning to be confirmed – SAS Tervuren

Audience
All who need to prepare data with a focus on analytical analysis afterwards.

Course Description
How to build powerful data marts for analytical modeling and data science in an efficient way? You learn about the ecosystem for analytic data preparation and the role of the data scientist in this environment. The most commonly used analytic data structures and their adequacy for certain analytic business questions are discussed. You receive guidelines for how to approach the creation of important derived variables to increase the predictive power of your models. The topic “Data Quality” is discussed from an analytical viewpoint. Relevant data quality criteria for analytics are discussed and methods are shown how the quality status of the data can be profiled and improved with analytical methods. As not all data quality problems can be corrected, results of simulations studies that quantify the consequences of poor data quality, are shown. This allows a better decision whether to proceed with inferior data or not. Learn how to

- Describe in detail the business environment in which data preparation is included
- Identify the relevant data sources based on the business questions
- Better understand the importance of data preparation and data quality for data science
- Structure your data in an analytic data mart
- Define the relevant data quality criteria for your data and how to profile data quality
- Create derived variables from different tables and table relationships
- Consider characteristics of predictive modeling

Instructor
Gerhard Svolba, author of the SAS Press books Data Preparation for Analytics and Data Quality for Analytics, is a senior solutions architect and analytic expert at SAS Institute Inc. in Austria, where he specializes in analytics in different business and research domains. His project experience ranges from business and technical conceptual considerations to data preparation and analytic modeling across industries. Gerhard Svolba studied business informatics and statistics at the University of Vienna and Technical University of Vienna and holds a master's degree. From 1995 till 1999, he was assistant professor in the department for medical statistics at the University of Vienna, where he completed his PhD on statistical quality control in clinical trials (the respective book is published in Facultas). In 1999 Gerhard joined SAS Institute Inc, where he specializes in analytics.
**Prerequisites**

A basic understanding of statistical analysis, possibly also have experience in the context of data mining, statistics or forecasting. Programming skills may be helpful but are not mandatory.

**Duration**

2 days

**Price per person**

€ 1.400 (excl. VAT)

Detailed course outline and online registration through this link: [Data Preparation and Data Quality for Analytics](#)
**Business Knowledge Series:**
*Strategies and Concepts for Data Scientists*

*How to translate the business problem through statistical analysis into actionable business decisions?*

1st, 2nd, 3rd February 2016 – SAS Tervuren

**Audience**

Statisticians, market researchers, information technology professionals, data scientists, and business analysts who want to make better use of their data.

**Course Description**

To be effective in a competitive business environment, analytics professionals need to use descriptive, predictive, and prescriptive analytics to translate information into decisions. An effective analyst also should be able to identify the analytical tools and data structures to anticipate market trends.

In this course, you gain the skills data scientists and statistical business analysts must have to succeed in today's data-driven economy. Learn about visualizing big data, how predictive modeling can help you find hidden nuggets, the importance of experiments in business, and the kind of value you can gain from unstructured data. Learn how to

- express a business problem as a manageable analytical question
- identify the appropriate analysis to address the question
- visualize and explore data
- select statistical analyses that help answer the question
- translate complex statistical results into actionable business decisions.

**Instructor**

Dr. Torsten Scholz is a course instructor at SAS, specialized in statistics and data mining. He received his PhD in Statistics from the University of Munich. Prior to joining SAS in 2013, he worked at an insurance company where he built predictive models for churn prevention and the calculation of customer lifetime values.

**Prerequisites**

Before attending this course, you should have taken a college-level course in statistics, covering distribution analysis, hypothesis testing, and regression techniques or have equivalent knowledge.

**Duration**

3 days

**Price per person**

€ 2,160 (excl. VAT)

Detailed course outline and online registration through this link: [Strategies and Concepts for Data Scientists and Business Analysts](#)
Business Knowledge Series:
Adequate Communication → Value Dynamics for Data Scientists:
How to Generate and Deliver Value with Analytics to non-Experts

21st & 22nd March 2016 – SAS Tervuren

Audience

This module is designed specifically for the following profiles:
Data scientists with at least 2 years of experience in this role and eager to develop their ability to communicate the results of their work (analysis, statistical models,) in different formats to non-expert audiences (manager, sales, marketer, Manager).

Course Description

Today, development of Big Data and business analytics leads to new roles in the organization. A data scientist is an expert or a consultant who excels in the art of analysing data. This profile is currently highly wanted and job prospects for years to come in this area are promising.
The data scientist is a talent that has a rare combination of skills: analytical, technical, business and communication. Where the analytical and technical skills are the usual criteria for recruitment of these profiles, field experience shows that the ability to communicate effectively the results of Analytics to non-experts (manager, sales, marketer…) is a factor for success in this role.

Learn how to

- Increase awareness of your natural style of communication, of communication profiles with whom it is easy/difficult to communicate and develop effective communication strategies
- Learn to adapt the format of presentation of results of complex analysis to non-expert stakeholders (manager, sales, marketer, and leader).
- Learn how to convince internal clients to use the results of complex analysis in their business.
- Test and implement the transformation of the results of analysis in different formats of presentation.
- Prepare a development plan to continue to deepen your ability to communicate analysis results to different audiences.

Instructor

Martine George holds an MBA and a PhD in physical sciences. She has over 24 years of professional experience, including 15 years spent developing business analytics teams within large organizations from different industries.
She is the Talent Development Director of Accenture Chair in Strategic Business Analytics at ESSEC Business School, Paris.
She is regularly invited as a speaker and expert in events related to business analytics abroad.
Passionate about developing talent and organizations in business analytics, she is also ICF certified coach, facilitator, trainer and consultant in cultural transformation of organizations.
Prerequisites

Before attending this course, you should have at least 2 years of experience as a Data Analyst, hence have an understanding of statistical methods. Previous SAS software experience is not necessary.

Strengths of this Training

- Customized individual coaching sessions before and after training.
- Educational tools from practice in business, dedicated to the optimization of complex communication results to non-expert audiences.
- Co-creation of good practice from the experiences of the participants.
- Training and experiences built around specific cases encountered by Data scientists in their daily activities.

Duration

2 days + a pre- and post-training coaching session

Price per person

€ 1.790 (excl. VAT)

Detailed course outline and online registration through this link:
Value Dynamics for Data Scientists: How to Generate and Deliver Value with Analytics to Non-Experts
**Business Knowledge Series:**
**Advanced Analytics in a Big Data World**

*How to successfully adopt recently proposed state-of-the-art analytical and data-mining techniques for advanced customer intelligence applications.*

**27th up until 29th April 2016 – SAS Tervuren**

**Audience**

Those involved in estimating, monitoring, auditing, or maintaining models for various types; those involved with using data mining techniques for various types. Job titles including business analysts in various settings (e.g. risk management, manufacturing, telco, retail, advertising, public, pharmaceutical, and so on), marketing/CRM managers, fraud managers, customer intelligence managers, risk analysts, CRM analysts, marketing analysts, senior data analysts, and data miners.

**Course Description**

Many companies have gathered huge amounts of customer data about marketing success, use of financial services, online usage, and even fraud behaviour. Given recent trends and needs such as mass customization, personalization, Web 2.0, one-to-one marketing, risk management, and fraud detection, it becomes increasingly important to extract, understand, and exploit analytical patterns of customer behaviour and strategic intelligence. This course helps clarify how to successfully adopt recently proposed state-of-the-art analytical and data-mining techniques for advanced customer intelligence applications.

Learn how to

- apply a series of powerful, cutting-edge analytical and data mining techniques
- ensure the practical application of these techniques to optimize strategic business processes and decision making
- explore a futuristic vision of how emerging data mining techniques might change your key business processes
- deploy, monitor, and optimally back-test data mining systems.

**Instructor**

Professor Bart Baesens is a professor at KU Leuven (Belgium), and a lecturer at the University of Southampton (United Kingdom). He has done extensive research on analytics, customer relationship management, web analytics, fraud detection, and credit risk management. His findings have been published in well-known international journals (e.g. Machine Learning, Management Science, IEEE Transactions on Neural Networks, IEEE Transactions on Knowledge and Data Engineering, IEEE Transactions on Evolutionary Computation, Journal of Machine Learning Research, …) and presented at international top conferences.

He regularly tutors, advises and provides consulting support to international firms with respect to their analytics and credit risk management strategy.
Prerequisites

Before attending this course, you should know how to
- preprocess data (such as sampling, missing values, outliers, categorization, and so on)
- develop predictive models using logistic regression and decision trees
- develop descriptive models using basic segmentation techniques
- quantify the performance of predictive models (such as lift curves, ROC curves…).

E-learning

Equivalent of 3 days classroom training

Price per person

€ 1.380 (excl. VAT)

Detailed course outline and online registration through this link:
Advanced Analytics in a Big Data World
**Practical Information**

**Approach**

The classroom courses aim at providing a sound mix of both theoretical, technical insights as well as practical details, illustrated by several real-life cases. It will be highly interactively organized.

**Location**

The course will be taught at the SAS training facilities Kasteel de Robiano, Hertenbergstraat 6, 3080 Tervuren, see roadmap (.pdf).

**Day Schedule**

Starting at 9.00 a.m. and ending at 5.00 p.m.

**Language**

All classes are taught in English.

**Information**

Do not hesitate to contact the SAS Customer Education Team with your questions!

✉ education@sbx.sas.com - ☎ 02 766 07 00

**Course Registration**

To reserve your seat, contact the SAS Customer Training Team at education@sbx.sas.com or register online (see links at the end of each course outline).

If the course dates do not fit your calendar, or you wish to organize a training specifically for your team, feel free to contact us!