SAS® Education

Advanced Analytics Course Series

September/October 2015

Discover real value in your corporate data.
www.sas.de/education/analytics

sas
THE POWER TO KNOW®

SAS Education

Learn How to Explore Options in Your Data

As data floods your organization on a daily basis, the question is no longer "What is big data?" Instead, it is "What can we do with the big data we have?" Analytics opens up the world of the possible. By using big data analytics you can extract only the relevant information from terabytes, petabytes, and exabytes and analyze it to transform your business decisions for the future.

SAS Education will help you to explore your options and make the best possible business decisions.

Grow with us

Analytical Concepts

Analytics: Putting It All to Work

Many companies are flooded with huge amounts of data. A key challenge is how to optimally manage this data overload and use analytics to better understand, manage, and strategically exploit the complex dynamics of customer behavior. This course elaborates on how you can efficiently use and deploy both predictive and descriptive state-of-the-art analytics to optimize and streamline your strategic business processes such as marketing campaigns and/or risk management. Examples of business applications that are covered include credit scoring and risk modeling, customer retention and response modeling, market-basket analysis and cross-selling, customer lifetime value modeling, and web intelligence and social network analytics.

Instructor:
Dr. Thomas Verbraken, CFA, KU Leuven

Dr. Thomas Verbraken received his PhD in applied economics at KU Leuven, in Belgium. As a member of professor Bart Baesens' research team, he has done research on predictive analytics. More specifically, he has worked on customer churn prediction, profit-based classification performance measurement, and classification in network environments. He has published his research findings in well-known international journals. He is also a CFA charter holder, and currently works in the financial industry in a risk methodology research team.

September 21, 2015, Heidelberg

Fraud Detection and Customer Segmentation

Fraud Detection Using Supervised, Unsupervised, and Social Network Analytics

A typical organization loses an estimated 5 % of its yearly revenue to fraud. This course will show in various real-life cases how learning about fraud patterns from historical data can be used to fight fraud. To be discussed is the use of supervised learning (using a labeled data set), unsupervised learning (using an unlabeled data set), and social network learning (using a networked data set). The techniques can be applied across a wide variety of fraud applications, such as those that tackle insurance fraud, credit card fraud, anti-money laundering, healt-care fraud, telecommunications fraud, click fraud, tax evasion, counterfeiting, etc.

Instructor:
Véronique Van Vlasselaer, PhD Researcher, KU Leuven

Véronique Van Vlasselaer graduated magna cum laude as Master Information Systems Engineer at the faculty of Business and Economics, KU Leuven (Belgium). For her master's thesis topic "Mining Data on Twitter", she received the best thesis award from the faculty's student branch. In October 2012, Véronique Van Vlasselaer started as a PhD researcher with Professor Bart Baesens at the Department of Decision Sciences and Information Management. Her main research topics include social network analysis, fraud detection, and net lift modeling.

October 12-13, 2015, Heidelberg

Customer Segmentation Using SAS® Enterprise Miner™

No marketing or customer contact strategy can be effective without segmentation. While the concept of segmentation is deceptively simple, in practice it is extremely difficult to execute. Emphasizing practical skills and providing theoretical knowledge, this hands-on, comprehensive course covers segmentation analysis in the context of business data mining. Topics include the theory and concepts of segmentation, as well as the main analytic tools for segmentation: hierarchical clustering, k-means clustering, normal mixtures, RFM cell method, text-based clustering, time-series clustering, and SOM/Kohonen method.

Instructor:
Dr. Goutam Chakraborty, Professor of Marketing, Oklahoma State University

Dr. Goutam Chakraborty, PhD, is a professor of marketing at Oklahoma State University, where he has taught data mining and CRM applications, advanced data mining, database marketing, new product development, marketing research, digital business strategy, web business strategy, electronic commerce, and interactive marketing and product and pricing management for the past 20 years.

October 05-07, 2015, Heidelberg

Self-paced E-Learning available: Advanced Analytics in a Big Data World

Given recent trends and needs in analyzing big amounts of data 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 behavior and strategic intelligence. This e-course helps clarify how to successfully adopt recently proposed state-of-the art analytical and data science techniques for advanced customer intelligence applications.

Advanced Data Mining

Applied Analytics Using SAS® Enterprise Miner™

This course covers the skills required to assemble analysis flow diagrams using the rich tool set of SAS Enterprise Miner for both pattern discovery (segmentation, association, and sequence analyses) and predictive modeling (decision tree, regression, and neural network models). In this course you learn how to define a SAS Enterprise Miner project and explore data graphically, modify data for better analysis results, build and understand predictive models such as decision trees and regression models, and compare and explain complex models. You generate and use score code and apply association and sequence discovery to transaction data.

Instructor:
Prof. Dr. Christina Andersson, Frankfurt University of Applied Sciences

After finishing her master's degree at the University of Linköping (Sweden), Christina Andersson started her PhD studies in mathematical statistics in Kaiserslautern. The topic for her PhD was Data Mining with Support Vector Machines. After a couple of years as a trainer at SAS, Christina left for a professorship at Frankfurt University of Applied Sciences. As a statistics expert she teaches courses in statistics and data mining and she developed the course "Advanced Analytical Methods Using SAS Enterprise Miner Software".

- **September 30–October 2, 2015, Heidelberg**

Advanced Analytical Methods Using SAS® Enterprise Miner™ Software

This course covers advanced applications of SAS Enterprise Miner. Using some of the newest modeling nodes, you learn how to use advanced prediction techniques for classification and regression. Current variable selection methods are illustrated. You learn how to apply incremental response modeling in order to evaluate the impact of marketing campaigns on different customer groups. Furthermore, you will gain experience in using SAS Enterprise Miner for survival data mining.

Instructor:
Prof. Dr. Christina Andersson, Frankfurt University of Applied Sciences

- **September 14 -16, 2015, Vienna**
- **September 23-25, 2015, Heidelberg**

"It's clear that the big data era will be one of dramatic business opportunity – don't wait too long to exploit its potential."

Tom Davenport

Text Mining and Analytic Data Preparation

Text Mining for Data Scientists and Business Analysts

To be effective in a competitive business environment, analytics professionals need to use all the information available. That means not only structured information is valuable, but it is important to analyze unstructured textual information too. This can be information which is conveyed e.g. via e-mail contact with the customer directly, during complaint management, or in open-ended questions in a survey. In this course, you gain the skills data scientists and business analysts must have to successfully integrate unstructured text information into your decision-making. Discover a process model for how to handle textual information, get to know the differences between unstructured text information and structured data, learn how to prepare or parse textual data and how to use such quantified texts to find hidden nuggets which can improve your decision-making. And discover applications for text mining for pattern recognition and prediction.

Instructor:
Prof. Dr. Andreas Hilbert, Full Professor and Chair of Business Informatics, Dresden University of Technology

Andreas Hilbert got his PhD in 1998 at the Department of Mathematical Methods in Economics from the University of Augsburg. In 2003 he became a professor in Business Administration and in 2004 he became Chair for Business Informatics and Business Intelligence at the Dresden University of Technology. Since then, Professor Hilbert has continued to be an active researcher, trainer and consultant in the areas of market research, statistical data analysis, data mining, and business analytics. He is also Chairman of the Business Intelligence Research Association in Dresden and a board member of the Section of Business Intelligence of the German Society for Computer Science.

September 24-25, 2015, Heidelberg

Building Analytic Data Marts

This course teaches you how to build powerful data marts for analytical modeling in an efficient way. You learn about the ecosystem for analytic data preparation and the most commonly used analytic data structures as well as their adequacy for certain analytic business questions. You receive guidelines for how to approach the creation of important derived variables to increase the predictive power of your models. You learn tips and tricks for efficient SAS programming for the creation of analytic data marts.

Instructor:
Dr. Gerhard Svolba, Principal Solutions Architect, SAS Austria

Dr. Gerhard Svolba 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 various industries. He is the author of "Data Preparation for Analytics Using SAS®" and "Data Quality for Analytics using SAS®".

October 13-15, 2015, Heidelberg

Analyze and Visualize Big Data

Strategies and Concepts for Data Scientists and Business Analysts

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.

Instructor:
Dr. Torsten Scholz, Analytics Trainer, SAS Germany

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.

September 28-30, 2015, Heidelberg

SAS® Visual Analytics and Visual Statistics – Essentials

This course is designed for attendees who want to get an introduction to the exploring and reporting capabilities of SAS Visual Analytics as well as the potential of SAS Visual Statistics. The course provides a brief overview of the SAS Visual Analytics solution and then focuses on SAS Visual Analytics Explorer, SAS Visual Analytics Designer, and SAS Mobile BI. Moreover, attendees get an introduction to SAS Visual Statistics for building predictive models in an interactive, exploratory way. The course is hands-on and it provides direct access to an environment for exercises and practical exposure.

Instructors:
Thomas Wende, Senior Technical Training Consultant, SAS Germany

Dr. Torsten Scholz, Analytics Trainer, SAS Germany

Thomas Wende joined SAS in 2006 as a Technical Trainer. He is a specialist in SAS Business Analytics and SAS Visual Analytics. Tom was the first trainer to teach visual analytics courses in Germany and he also is one of the few certified SAS Certified Visual Analytics Technical Specialists. He is married with two children and when he is not leading training sessions at SAS, he plays the bass in a band and practices self-defense combat Krav Maga.

October 07-09, 2015, Heidelberg

"Companies that incorporate analytics into their culture are finding success in the new digital era."

MIT Sloan Management Review

Forecasting and Design of Marketing Campaigns

Forecasting Using SAS® Software: A Programming Approach

This course teaches analysts how to use SAS/ETS software to diagnose systematic variation in data collected over time, create forecast models to capture the systematic variation, evaluate a given forecast model for goodness of fit and accuracy, and forecast future values using the model. Topics include Box-Jenkins ARIMA models, dynamic regression models, and exponential smoothing models.

Instructor:
Dr. Mihai Paunescu, Senior Analytics Consultant, SAS Austria

During the last six years Dr. Mihai Paunescu has supported SAS projects in the field of Advanced Analytics with a focus on data mining, predictive modelling and forecasting in the banking, insurance, trading, industry and logistics environment as well as for public administration. At varying functional context his methodical focus always remains the analysis of data for the creation of statistical forecast models. So for example he developed models for the prediction of credit losses in the credit risk area. In the public sector his analyses are used for fraud detection at wage tax evasion. An airport operator prepares his daily estimation of passenger volumes on board every plane using his models.

September 28-30, 2015, Heidelberg

Design of Experiments for Direct Marketing

This course teaches how to design marketing campaigns answering more than just one question (multi-factor-designs) and how to maximize the information that is gleaned from a marketing campaign. Interactions (or moderating variables) can also be identified. In this course business analysts and market researchers learn how to build efficient experimental designs that generate as much information as possible for minimum cost, they test as many factors as possible in a given campaign and they apply well-known experimental design practices to direct marketing efforts. The appropriate sample size for your tests will be determined and challenges associated with analyzing experimental designs identified.

Instructor:
Sebastian Hoffmeister, Statistician and Analytics Trainer, STATCON

Sebastian Hoffmeister is a trainer and senior statistical consultant for STATCON. He holds a master's degree in Statistics from Ludwig Maximilians University in Munich. He is an expert in machine learning and multivariate analysis, especially using cluster algorithms. He also focuses on econometrics and forecasting methods. At STATCON he runs training sessions and interactive webinars for scientists and managers on finance and insurance for business and in the life science area and the design of experiments.

September 29-30, 2015, Heidelberg

"46 % of organizations cite inadequate staffing or skills for big data analytics." TDWI Research

Advanced Analytics Course Series

Schedule for September/October 2015

Course	Duration	Regular Price	Early Bird Price*	Location	Date
Analytics: Putting It All to Work	1 day	€ 830	€ 690	Heidelberg	Sept. 21
Fraud Detection Using Supervised, Unsupervised, and Social Network Analytics	2 days	€ 1660	€ 1380	Heidelberg	Oct. 12
Customer Segmentation Using SAS Enterprise Miner	3 days	€ 2490	€ 2070	Heidelberg	Oct. 05
Applied Analytics Using SAS Enterprise Miner	3 days	€ 2070	€ 1770	Heidelberg	Sept. 30
Advanced Analytical Methods Using SAS Enterprise Miner Software	3 days	€ 2070	€ 1770	Vienna	Sept. 14
Advanced Analytical Methods Using SAS Enterprise Miner Software	3 days	€ 2070	€ 1770	Heidelberg	Sept. 23
Text Mining for Data Scientists and Business Analysts	2 days	€ 1660	€ 1380	Heidelberg	Sept. 24
Building Analytic Data Marts	3 days	€ 2070	€ 1770	Heidelberg	Oct. 13
Strategies and Concepts for Data Scientists and Business Analysts	3 days	€ 2070	€ 1770	Heidelberg	Sept. 28
SAS Visual Analytics and Visual Statistics – Essentials	3 days	€ 2070	€ 1770	Heidelberg	Oct. 07
Forecasting Using SAS Software: A Programming Approach	3 days	€ 2070	€ 1770	Heidelberg	Sept. 28
Design of Experiments for Direct Marketing	2 days	€ 1660	€ 1380	Heidelberg	Sept. 29

Advanced Analytics in a Big Data World – **E-Learning:** Please book this e-course in your home country – WebCode: BDMC13

*Early bird price until June 30.

No other discounts apply.

The prices mentioned above do not include VAT (19%).

Please register here:
www.sas.de/education/analytics

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