



Big Data: Predictive & Cognitive Analytics

Training course explaining how to easily create predictive models.

- Learn how to build predictive analytics models against the 'Big Data' backdrop.
- Acquire practical skills that can be immediately implemented in your workplace.
- Create a model on your own data in the 'model jam' session, where you will create a model based on data you bring with on hand consultancy.

The workshop is delivered in modules of one hour where the instructor will explain with the aid of practical demonstration then allow the class time to imitate on their terminals. Each Presentation Session will be followed by a one hour practice and problem solving session, short break and before moving onto the next concept.

23 – 25 February 2016, Amsterdam

28 – 30 March 2016, Dubai

13 -14 April 2016, New York

18 -20 April 2016, San Diego

28 – 30 July 2016, Johannesburg

22- 24 August 2016, Atlanta

Overview

Machine Learning, once the stalwart of Science Fiction, has encroached on every area of our lives. Whether it is an online marketplace using data driven predictive analytics to suggest products to their customers or image processing predictive analytics embedded in car safety systems, the predictive analytics work product is ubiquitous. For organisations the commercial opportunities presented by vast amounts of data so routinely stored, subject only to being able to make sense of the data, can provide returns on investment many times more than the individual or technological cost in creating such models.

While the applications for predictive analytics are quite profound and represent impressive academic advancement, the techniques to create such models are actually quite initiative, simple to understand and in fact accessible to end users who have little more than Excel experience yet a deep understanding of their business domain.

The audience of this course will be taught procedures involved in the creation of predictive analytics with a pragmatic level of academic explanation so by the end users may understand and create predictive analytics for their organisation.



Your Trainer Richard Churchman

Richard Churchman is the Developer and Data Scientist responsible for the creation of AI FX and Equity (www.aifxe). AI FX and Equity is a cloud software service that uses Predictive and Cognitive Analytics to predict the direction and magnitude of a financial instrument price change within a trading horizon. Richard has

been developing predictive analytics for over 15 years and has developed models in active use in a variety of industries (customer value, financial forecasting, consumer credit risk and customer segmentation).

Who should attend?

The 3 Day MBA in Big Data: Predictive & Cognitive Analytics is designed to bridge knowledge gaps and bring true business advantage. The course will provide you with insight into Big Data analytics and will be useful for a variety of roles. Previously attendees have included:



Heads of
Technology



Risk Executives



Heads of
Analytics



C-Suite
Executives:
CEOs, CFOs,
CMOs, COOs,
CIOs etc



Marketing
Managers



Business Unit
Heads

True Business Advantage

- **Understand** Predictive Analytics and be able to communicate data and your data manipulation ideas in a commonly understood manner.
- **Analyze** using summary statistics and be able to apply techniques to describe data using Palisade Statools.
- **Create** your first useable models with Linear and Logistic Regression using Palisade StatTools.
- **Collaborate** in making sense of your subjective judgment using probability, likelihood and decision trees using Palisade PrecisionTree.
- **Design** Bayesian network models applying techniques to create Causes and Consequence models using Norsys Netica.
- **Describe** The different types of Neural Networks and Machine Learning Techniques and the specific problems they can solve and use the NeuroSolutions to effortlessly create powerful and deployable models.

mba
inhouse

If you have a team of 6 or more to train, why not take the 3 Day MBA in Big Data: Predictive & Cognitive Analytics as an inhouse course? Our experts will come to you and the course is tailored to your requirements.

Call +44 (0) 207 092 1045 or contact us at training-eu@terrapinn.com for more details or to request a free training needs analysis

Register now: visit www.terrapintraining.com or call +44 (0) 207 092 1045

day 1

Overview

The first day of the workshop will focus on numeric prediction and will use simple techniques to produce Predictive Analytics based upon proprietary market datasets provided by AI FX and Equity (www.aifxe.com, a Cypher Data Venture).

Day one will be orientated around so called 'Linear' techniques.

Introduction

- What is Big Data, Predictive Analytics and Cognitive Analytics?
- Heuristics and Judgmental Bias.
- Origins of Predictive Analytics
- Uses and Limits of Predictive Analytics
- The process; Store, Abstraction, Generalisation and Evaluation.
- Inputs
- Types of Predictive Analytics to be covered.

Case Study: Oil Price OHLC Data using Excel and Tradingview.

Basic Statistics with Palisade StatTools

- Statistics Briefing
- Distributions and Histograms.
- Range, Mean, Median and Mode.
- Measuring Spread, Standard Deviation and Variance.
- Scatter Plots to estimate relationships.
- Correlation Analysis.
- "Stepwise" Correlation.

Case Study: EURUSD Analysis using Plots, Fitting, Correlation and "Stepwise Correlation"

Abstraction and Transformations

- Making Data Meaningful and creativity
- Statistically Determined Feature Abstraction Techniques
- Horizontal \ Feature Abstraction Techniques
- Vertical \ Examples Abstraction Techniques.
- Random Digits for Sampling.

Case Study: Abstracting and Sampling USDJPY OHLC Data.

Linear Regression

- Introduction to Linear Regression, one way, using Palisade StatTools.
- Line Fitting.
- Reading and understanding a Linear Regression Output.
- Boundaries for your expert judgment, confidence intervals.
- Improving Model Performance.
- Stepwise Linear Regression using Palisade StatTools.

Case Study: USDJPY forecasting using Linear Regression.

day 2

Overview

The second day of the workshop will focus on predictive analytics using more advanced techniques and machine learning. Day two is orientated around so called 'nonlinear' techniques and introduces classification.

Review of Previous Day

Logistic Regression

- What is Logistic Regression and how does it differ?
- Logistic regression for analysis of a 'up or down' using Palisade StatTools.
- The Confusion Matrix.
- Stepwise Logistic Regression using Palisade StatTools.

Case Study: USDCHF forecasting, "Up or Down".

Probability, Product and Decision Trees

- The Inevitability of Subjectivity.
- Expressing likelihood and probability.
- Unconditional Probability.
- Forward Condition Probability and Product.
- Expert Judgement and Expert Collaboration.
- Introduction to Decision Trees.

Case Study: USDCHF forecasting, "Up or Down".

Norsys Netica and Bayesian Analysis.

- Posterior Probability.
- Data Preparation.
- Creating a new Bayesian Network.
- Creating Node Probability Tables.
- Testing.
- Structure Ideas.
- Machine Learning Structure.
- Machine Learning Node Probability Tables.

Case Study: DAX Index forecasting, "Up or Down" only.

Introduction to NeuroSolutions

- Introduction to Artificial Neural Networks.
- Creating a neural network
- Training a neural network
- Testing a neural network
- Analyzing your results
- Optimizing neural network parameters / inputs
- Sensitivity.

Case Study: Gold price forecasting using NeuroSolutions.

day 3

Overview

The final day of the workshop will focus on using computation power to automate model search and selection.

The class will culminate in a 'model jam' where the participant will work on their own dataset to solve a real-world problem that can add immediate value to the workplace.

Review of Previous Day

Neural Network Topology

- Multi-layer Perceptrons (MLPs)
- Different Training Methods.
- Generalization.
- NeuralBuilder.
- Support Vector Machines
- Probability Neural Networks.

Case Study: Silver price forecasting using NeuroSolutions.

Automated Processing with NeuroSolutions Infinity

- Introduction to NeuroSolutions Infinity
- Data Preparation in Infinity.
- Projects and Experiments.
- Ranking Inputs
- Ranking Models
- Validating Models
- Production Data in Infinity

Case Study: GBPUSD forecasting using NeuroSolutions.

Model Jam

Case Study: Under supervision and consultation of the facilitator the class will independently create a model based on data that has been brought by the attendee. In the absence of data having been brought a different, open-source, dataset will be provided by the facilitator depending on the industry that the attendee participates.

reserve your place today

The earlier you book the more you'll save.

It's easy to register online.

Our online calculator will ensure you take advantage of the best deal.

Go to www.terrapiintraining.com to register now.

This course uses a variety of GUI applications to perform predictive analytics. A basic understanding of Excel is all that is required.

The follow on course, **Big Data: Predictive & Cognitive Analytics with R**, builds upon these concepts using the all-encompassing statistical programming language R.

	Before 5 Dec 2015	Before 16 Jan 2016	Before 6 Feb 2016	After 6 Feb
23 - 25 February 2016, Amsterdam	£2,700 Save £600	£3,000 Save £300	£3,150 Save £150	£3,300
	Before 9 Jan 2016	Before 20 Feb 2016	Before 12 Mar 2016	After 12 Mar 2016
28 - 30 March 2016, Dubai	£2,700 Save £600	£3,000 Save £300	£3,150 Save £150	£3,300
	Before 23 Jan 2016	Before 5 Mar 2016	Before 26 Mar 2016	After 26 Mar 2016
13 -14 April 2016, New York	\$4,745 Save \$1050	\$5,270 Save \$525	\$5,535 Save \$260	\$5,795
	Before 30 Jan 2016	Before 12 Mar 2016	Before 2 Apr 2016	After 2 Apr 2016
18 -20 April 2016, San Diego	\$4,745 Save \$1050	\$5,270 Save \$525	\$5,535 Save \$260	\$5,795
	Before 7 May 2016	Before 18 Jun 2016	Before 9 Jul 2016	After 9 Jul 2016
28 - 30 July 2016, Johannesburg	R40,685 Save R9,040	R45,205 Save R4,520	R47,465 Save R2,260	R49,725
	Before 4 Jun 2016	Before 16 Jul 2016	Before 6 Aug 2016	After 6 Aug 2016
22- 24 August 2016, Atlanta	\$4,745 Save \$1050	\$5,270 Save \$525	\$5,535 Save \$260	\$5,795

Prices are subject to VAT

At Your Own Pace



You can take many of the MBA Training courses online. The 12 Hour MBA delivers courses online, through video, quizzes and workbooks.

Find out more at www.terrapiintraining.com

Train Your Entire Team



Get your entire team up to speed in one go. Register 4 delegates and bring a 5th for free.

Contact us for more details or to discuss: www.terrapiintraining.com or +44 (0) 20 7092 1045

At Your Own Place



We can come to you too! Why not hold a private in-house course?

Our experts come to you and the course is tailored to the requirements of your business.

Call +44 (0) 20 7092 1045 or visit our website for more details.



This is something different in management and professional training courses. We specialise in big ideas and fundamentals so you can master complex subjects, at speed. Receive the essence of an MBA without, of course, actually doing one.

Our curriculum is presented across the world and covers the most important markets and disciplines. We offer public, online and in-house courses.

All of our courses are certified by an independent body, the CPD Certification Service, and can be counted toward CPD credits.

Visit www.terrapiintraining.com for more details.

