

## Course Proposition and Executive Summary

Professor David J. Hand of the Imperial College (London) wrote that statistical ideas and methods underline just about every aspect of modern life and whilst some are obvious, many statistical tools and concepts are very much hidden in the background. From urban city planning to healthcare, from public citizenry safety to education, we see how decisions were made, policies crafted and legislations passed with the statistical elements in them.

In this course, we endeavor to equip participants with a sound knowledge and strong grounding in intermediate and advanced statistical tools and methods. Conducted in an interactive and easy-to-understand approach, this course covers topics ranging from 3-Way Chi-Sq, to advanced Analysis of Variance (ANOVA) models and Logistic Regression models involving categorical targets.

### Who is this course for?

This course is specially designed for data analysts, researchers and executives who are interested to learn intermediate to advanced statistical modeling techniques and its applications. Aimed at equipping participants with statistical modeling techniques ranging from ANOVA models to logistic regression modeling, this 2-day workshop offers participants the plethora of important statistical tools and models to analyze their data.

Participants should ideally possessed a tertiary qualification (Diploma and above) and be highly comfortable with quantitative discussions, applications and working with models and algorithms.

### Course Content

- Categorical Data Analysis: 3-Way Chi-Sq Test
  - 3-Way Cross-tabulation Tables
  - Control variables and its interpretations
- Means Testing: Analysis of Variance (ANOVA) Models
  - 1-Way ANOVA and Post-Hoc Tests
  - 2-Way ANOVA
  - Analysis of Covariance (ANCOVA)
  - Multiple Analysis of Variance (MANOVA)
  - Repeated measures ANOVA
- Predictive Models: Regression models involving categorical targets
  - Multiple Linear Regression
  - Logistic Regression

\*Software will be provided during training and participants will be taught how to use them during the course

### Course Objectives

At the end of this course, Participants will be able to:

1. Differentiate amongst the various statistical modeling tools,
2. Evaluate and assess the strengths and weaknesses of various statistical modeling techniques,
3. Describe and validate the assumptions of each statistical tool and model,
4. Design and apply the use of relevant analytical models and statistical solutions in addressing research problems.

## **Pre-requisite**

Participants should have attended the course "Introduction to Statistics and Quantitative Data Analysis", or possessed knowledge of the content to the above course before signing up for this course.

Participants should generally be comfortable with quantitative discussions, applications and working with models, testing of assumptions and algorithms.

## **Mode of Assessment**

Participants are required to sit for an open-book quiz where participants will be graded in accordance to the course objectives to ensure they are met in a practical way.

## **Price Schedule**

\$850/pax (Subjected to prevailing GST)

## **Certificates/Awards**

Certificate of Performance will be awarded if participant satisfies the course criteria.

## **Profile of Trainer**

Mr. Ng Jinsheng joined IBM SPSS in 2008 as an Executive in Training and Consulting after his graduation from the National University of Singapore (NUS) with a Degree in Statistics and Applied Probability. During his stay in IBM SPSS, he has trained hundreds of participants from the public service and private sector in statistical and data mining concepts, tools and applications in solving business problems. He has also led consulting projects and worked with C-level executives in addressing pressing business issues during which he received numerous praises and testimonies. During his working with IBM SPSS, Mr. Ng Jinsheng also completed his Masters of Science in Knowledge Management [M.Sc(KM)] from the Nanyang Technological University (NTU) and graduated one of the top in his cohort with a Dean's List award in academic excellence. He later joined SAS Institute as an Education Specialist in the Training department, and thereafter as a Senior Associate in Professional Consulting Services.

An academic paper he has co-authored was nominated for the Best Paper Award in the 20th International Conference on Computers in Education (2012). He is currently a founding member of AnaVantage Management Consultancy LLP, and lectures and trains at Tertiary Institutions in Singapore in the area of business statistics, data mining and analytics, and develops analytics courses for undergraduate programmes in Singapore. He is also an IBM Business Analytics Certified Specialist in IBM SPSS Modeler (Professional) and IBM SPSS Statistics, as well as SAS Certified Predictive Modeler using SAS Enterprise Miner and SAS Certified Business Analyst using SAS 9: Regression and Modeling.

Professionally as a Trainer, Jinsheng possessed an Advanced Certificate in Training and Assessment (ACTA) conferred by the Workforce Development Agency of Singapore (WDA) and a proud recipient of the prestigious "Excellence in Teaching" Award (EIT) conferred by the Singapore Polytechnic (SP) during the Annual Excellence in Teaching and Training Convention 2015. He is also conferred the title of an *Associate Adult Educator* by the Institute of Adult Learning (IAL) in 2016, an Adult Educators' Professionalisation recognition which awards pedagogical and professional excellence.