



**Certificate of Applied Talent Analytics II:**

**Certificate in Artificial Intelligence for People Analytics**

**Course Proposition and Executive Summary**

Artificial intelligence (AI) and machine learning is at the heart of the fourth industrial revolution which is taking the economy by storm and it will change how we work and what work means for us and our future generations ahead. Come discover what AI means for the human resource (HR) sector and how it can be applied in the space of talent analytics, and be equipped with the necessary skills and knowledge to take advantage of the next wave of industrial changes with confidence.

This course is specially designed for human resource professionals with the focus on workforce and talent analytics with a wide range of HR applications. Spanning a total duration of 2 days, this course seeks to empower participants with a sound grounding in artificial intelligence and machine learning techniques in solving pressing human resource challenges, where learning is facilitated with up-to-date case studies and applications in areas such as strategic decisions making in terms of employee recruitment, retention, prediction of employee performance across time, management of risk due to attrition, payroll analytics, compensation and benefit analysis and better management of employee engagement in responding to queries through the adoption of text analytics.

**Who is this course for?**

This course is an extension of the "Certificate in Applied Talent Analytics I" and covers more grounds and depth in terms of artificial intelligence and machine learning modelling techniques, model evaluation and how to tackle issues facing deployment of analytical solutions at the departmental and organizational level.

Participants with the relevant training and background in terms of knowledge and/or working experiences with analysing data in areas of business intelligence, business analytics and predictive analytics are welcome to apply.

## Course Content

Overview of Artificial Intelligence (AI) involving Machine Learning Tools and Techniques:

- Predictive Analytics
  - Modeling Techniques: Decision tree algorithms, Regression and Neural Networks
  - Case Studies: Predictive analytics and applications on the human resource sector

Applications of Regression Modeling: Making sense of advanced regression models

- Multiple Linear Regression,
- Binary Logistic Regression
- Applications of regression in payroll and claims analytics
- Applications of regression in compensation and benefit analysis

Advanced Artificial Machine Learning Algorithms and Models:

- Predictive analytics - Neural Network: Case Studies and its applications
- Pattern discovery – Segmentation and Cluster analysis
- Association Rule Mining - Sequence Detection modeling: Case Studies and its applications

Model Evaluation:

- Misclassification and Accuracy measures
- Average squared errors

Model Deployment and Model Management

- Best Practices and applications

Case Studies and Applications:

- Increasing Employee Engagement using Text analytics
- Organizational risk management in attrition analysis: Identifying potential employees who are at risk of leaving the organization
- Visualizing data and information for better Staff Management and risk profiling

Practical application: Applying principles of analytics using analytics software

\*Wherever possible, the course will be conducted with computer-aided data analysis software and participants will get a chance to see how analytics are being applied in real-life scenario.

## Pre-requisite

Participants with the relevant training and background in terms of knowledge and/or working experiences with analysing data in areas of business intelligence, business analytics and predictive analytics are welcome to apply.

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## **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**

\$690/pax (Subjected to prevailing GST)

## **Certificates/Awards**

Certificate of Performance awarded by the Singapore Training and Development Association (STADA) 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.