

## Data Analytics Committee

The Committee's role is to raise awareness on analytics skills that will be in demand in the future and share knowledge on applications of analytical practices and data technologies among SAS members and practice committees.

### The Committee has three sub-committees/ task forces:

1) Education Sub-Committee - Help members to upgrade their analytical/programming skills by way of conducting machine learning courses, workshops, sharing relevant webinars, online courses and research papers.

#### - Machine Learning with Python – Introductory Course Series (5 evening sessions):

Following the success of the first two series in 2018, another series took place in **April 2019**.

Scope: Data science methodology, Introduction to Python (Language/coding/libraries), Data manipulation/visualization, Exploratory data analysis, Families of machine learning, Practical case study (predict Titanic survivors) with pro-con of different machine learning.

Our talented Teacher: Karthikan Selvaraj, Data Scientist at Aviva Quantum

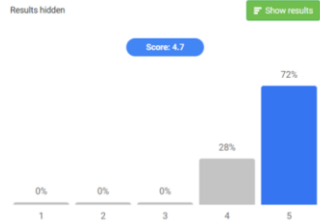


#### - DATA ANALYTICS DAY 22<sup>nd</sup> of November - NUS Business Analytics Centre

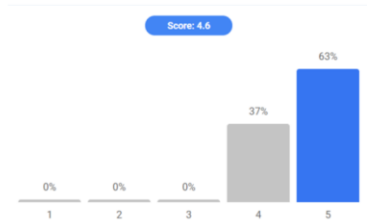
In collaboration with NUS, the committee members facilitated and presented to 31 SAS members and 14 NUS students a half day presentation + half day R computer hands off (Learn ABCs of Machine learning, how to use R for data visualization, actuarial and statistical models with practical cases, how to build workable machine learning models in R and Introduction to Kaggle Competition).



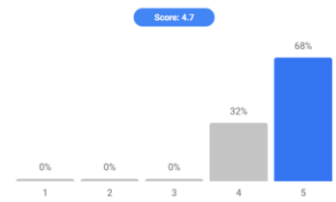
Presenters delivered material in a clear and structured manner and were well organized and prepared. 0 3 2



the mixed of coding and presentations had a good balance. 0 1 9



Presentations were informative and contained practical examples and techniques that are useful and can be applied to my work. 0 2 5



"Good breadth of material"  
 "Elaborate and interesting course material."  
 "Speakers are very enthusiastic on their topics."  
 "Well thought program and content."  
 "I have learnt and benefited so much today."  
 Thank you!"

2) Project/Kaggle/Publications Sub-Committee - Provide opportunities for members to gain practical experience in advanced predictive modelling techniques and data analytics.

In 2019, the project team of DAC continued to explore ways of developing analytics skillsets of the members through practical projects:

1. The team continued to explore new public data, including weather data and LTA traffic image data, to study the effect of environmental variables in affecting road incidents.
2. During Q2 2019, a Kaggle team which consisted of committee members and past participants of Machine Learning course was formed to participate in "Jigsaw Unintended Bias in Toxicity Classification" Kaggle competition. This competition provided a good challenge and learning opportunities to the team in applying latest text mining techniques to detect toxic comments across diverse range of conversations online. We are happy to report that our prediction result was ranked at top 19% of all participants.

Contact [twchyin@yahoo.com](mailto:twchyin@yahoo.com) or [frederic.boulliung@partnerre.com](mailto:frederic.boulliung@partnerre.com) if you are interested to join this sub-committee, basics knowledge in R or Python + machine learning is needed; for instance participants to our Machine Learning courses that we provide is sufficient.

3) Networking/Conference taskforce - Network with institutions, other actuarial societies, academia and corporate innovation labs etc. with the objective of gaining access to relevant speakers, teachers, volunteers and experts who can support our Committee to achieve its objectives and help other SAS committees with their initiatives relevant to analytics.

WW Joint Kaggle Competition

A Joint Kaggle Competition involving SAS, IFoA and IAA was mooted by the committee. An initial conference call involving interested parties from above institutions held in the later part of 2019 to find out the best way forward to realise this initiative. Some of the items discussed were administration, finding a dataset, sponsorship, ideal time to launch and duration of the competition and marketing. The plan is to launch the competition mid-2020.

Frederic Boulliung, Chairman  
Saliya Jinadasa, Deputy Chair  
Data Analytics Committee

Committee webpage: [http://www.actuaries.org.sg/big\\_data](http://www.actuaries.org.sg/big_data)