

Big Data Committee (BDC)

The objective of the Big Data Committee is to explore the future of big data, analytics and unstructured data in Asia and what actuaries need to do to have the right skillsets that will be in demand for such work.

The committee is made up of actuaries and data scientists based across Asia and globally from diverse range of industries. Members in 2017 term include Mudit Gupta (chair), Alvin Choong, Ankur Agarwal, Colin Priest, David Maneval, David Menezes, Frank Devlin, Frankie Chan, Frederic Boulliung, Huang Guoyu, Karthikan Selvaraj, Kate Chen, Paul Wang, Saliya Jinadasa, Wei Chyin Tan and Yu Mingjie.

In 2017, the SAS Council gave BDC committee status (previously this initiative was known as the Big Data Working Party) reflecting the more permanent nature of this committee as well as its increasing impact on SAS member community.

Further changes are planned for 2018 to support our rapid growth. I am also pleased to announce new appointments for 2018 term beginning March 2018: Frederic Boulliung is incoming Chairman, Saliya Jinadasa is incoming Deputy Chairman and Frank Devlin continues to be Chairman of Big Data Conference sub-committee. The incoming leadership team will bring new energy and momentum to the committee. We are also changing the name of this committee to Data Analytics Committee (DAC) in 2018 to better reflect focus areas and objectives of the committee.

2017 achievements

- **Two day Big data bootcamp in June in Singapore**





BDC's biggest event to date with more than 70 participants which included one day of presentations by seven industry practitioners on how they have implemented big data projects in their companies. Topics ranged from innovations in insurance, fraud detection and insights from telecommunications data. Second day was a hands-on workshop taught by Colin Priest.



Read about the bootcamp in SAS newsletter: <http://www.actuaries.org.sg/?q=node/18188>

- **2nd Asia Actuarial Analytics Challenge**

This year the competition had 93 teams participating that consisted of 99 individuals who made 1,254 submissions during the competition. We had support of 4 sponsors providing prizes for winners and discussion forums.

1 st Prize (SIN \$700)	Ms. Leng Mei (Nicolas) Research Scientist, Singapore	Sponsored by  Swiss Re
2 nd Prize (SIN \$500)	Mr. Luo Wuqiong Senior Data Scientist, Singapore	Sponsored by  AXIS
3 rd Prize (SIN \$300)	Mr. Deng Xiaodong Data Scientist, Singapore	Sponsored by  Allianz
Forum Prize (SIN \$100)	Mr. Kelvin Le Singapore	Sponsored by  Institute and Faculty of Actuaries

Winner's reports : <https://inclass.kaggle.com/c/asia-actuarial-analytics-challenge-2017>

- **Predictive Analytics in Marketing A Practical Example from Retail Banking**

The committee published Research Note No 1 which is the first in a series of articles. The purpose of this research note is to illustrate the typical framework and concepts used by data scientists within the machine learning paradigm. In doing so, we hope to demystify the approach to fledgling actuaries approaching predictive analytics for the first time. There were more than 500 downloads of this paper within three months of publication.



Predictive Analytics in Marketing A Practical Example from Retail Banking

by Alvin Choong,

with input from David Menezes, Frank Devlin, Mudit Gupta, Tan Wei-Chyin and Kate Chen

ABSTRACT

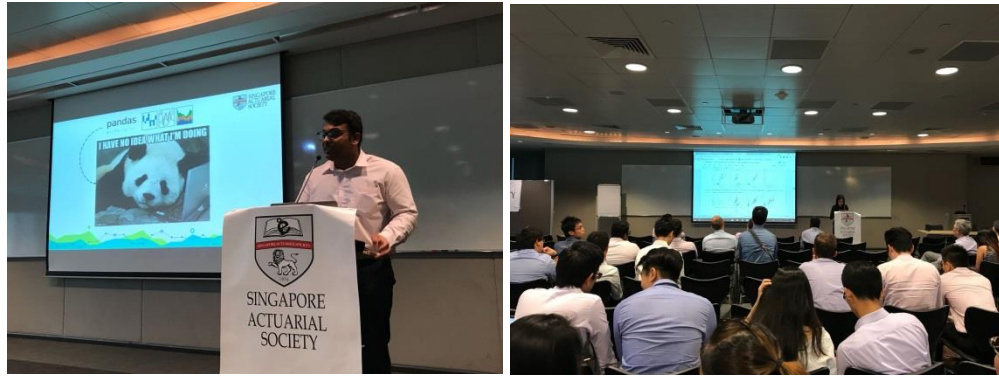
In this research note, we present a case study where we have applied predictive analytics methods to a historical retail banking dataset in order to yield usable insights for marketing of a term deposit investment product. The primary focus of the paper is to illustrate the typical framework and concepts used by data scientists within the machine learning paradigm. In doing so, we hope to demystify the approach to fledgling actuaries approaching predictive analytics for the first time. Links to the source code used to create the results in this paper is provided.

KEYWORDS: predictive analytics, machine learning, generalised linear models, gradient boosting models, training, validation, R.

Download Research Note: <http://actuaries.org.sg/?q=disknode/get/1860>

- **Regular CPD publications and speakers**

- Case study on “Visualising Traffic Incidents in Singapore with Public Data”
SAS Newsletter: <http://www.actuaries.org.sg/?q=node/18188>
- Afternoon talk on “Big data from organizational change perspective” by Theresa Blissing
Presentation: <http://www.actuaries.org.sg/?q=node/17792>
- Afternoon forum on “Introduction to Python” led by Karthikan Selvaraj & Huang Guoyu. This was one of the most popular afternoon forums with 80 attendees registering and strong feedback for a follow-up workshop building on this topic.



Presentation: <https://github.com/SASBDC/PythonTraining/tree/master/Pandas>

What's in store for 2018?

- **Education Strategy Review**

There is increasing demand of our workshops in Singapore and regionally. A review task force was formed in 2017 led by Frederic Boulliung to look at appropriate educational pathway, to what extent we can leverage off third party resources and what areas should BDC focus on. Findings of this review will be incorporated in subsequent programs run by the BDC. More details to follow.

- **Big data events**

There continues to be strong appetite by SAS membership as well as industry stakeholders for big data conference & workshops. Work is underway to bring another exciting event in 2018. To be announced soon.

- **Original research**

We continue to pursue research projects to study local data to find insights and develop case studies relevant for SAS members and wider community.

If you are interested in getting involved in any of the above projects, have an idea you wish to pursue or have any suggestions for the committee please feel free to reach out to any one of the members listed above.

Mudit Gupta, Chairman, Big Data Committee

Committee webpage: http://www.actuaries.org.sg/?q=big_data