



# Ashten Anthony

DATA SCIENTIST + ACTUARY

Kuala Lumpur, Malaysia

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## Work Experience

### NMG Consulting - Analyst, Senior Analyst

KL, Malaysia

#### DATA SCIENCE - MACHINE LEARNING

Aug. 2017 - Present

- Provided support for an Australian non-life insurer's pricing team to deconstruct their competitors premium (motor, home, landlords, motor-cycle, business packs).
- Machine learning algorithms such as Distributed Random Forest, Gradient Boosting Machine, eXtreme Gradient Boosting was built to deconstruct the premiums.
- These models were then used to provide insights (using scoring, variable importance, partial dependency plots) on competitor's pricing structure and strategy while also giving an indication of their own book's competitiveness.

#### DATA SCIENCE - VISUALISATION

- Independently built R shiny apps with visualisations for monitoring and analytical purposes.
- Visualisations built includes bar, line, density, heat, geo map charts and others. These shiny apps cater for various dynamic user inputs to maximise analytical value.
- Additionally, some apps were built to gather data from databases such as Amazon Redshift to maximise efficiency and minimise information lags.
- Shiny apps were then deployed and hosted on linux virtual machines for end users to access.

#### MARKET STUDY - AUSTRALIAN INSURANCE BROKERS

- Provided support in compiling and visualising Australian non-life market statistics. Data utilised here was published by Australian Prudential Regulation Authority (APRA).
- Visualisation was performed in Ms Excel and reporting was done in Ms PowerPoint.

#### ACTUARIAL PRICING

- Developed pricing models for auto insurance products which includes private car, commercial vehicles and motorcycles.
- Segmentation analysis was conducted on the data to find trends and abnormalities on potential rating factors.
- Pricing models were then developed using Generalised Linear Models in statistical softwares such as R Programming and SAS.

#### ACTUARIAL RESERVING

- Provided support in statutory liability valuation for general (re)insurance companies in Malaysia, Philippines and Sri Lanka.

### AIA - Intern

KL, Malaysia

#### MOTOR AND FIRE LIBERALIZATION

Jan. 2017 - Apr. 2017

- Analyzed current market's underwriting guidelines for Motor Insurance to help AIA revise its own underwriting guidelines.
- Conducted impact analysis to determine the effects of liberalization towards the portfolio. Risk factors and exposures were compared between a liberalized and non-liberalized environment.
- Assisted in building rating plans for motor insurance by analysing claims data to highlight high risk profiles.

#### PERSONAL ACCIDENT RISK PROFILING

- Required to identify and eliminate risky leads from a large database of customers.
- Performed data extraction using SQL from various sources to map out key risk indicators.

## Skills

#### SOFTWARE

- R - tidyverse, dplyr, dbplyr, shiny, ggplot2, ganimate, plotly, leaflet, RPostgreSQL, RJDBC, h2o, RStudio
- SAS - Base, Enterprise Guide, Enterprise Miner (Beginner)
- SQL - Data querying and preparation
- Microsoft - Excel, Access, Powerpoint, Word
- HTML & CSS - Beginner proficiency for R shiny dashboard development
- Minitab - Salford Predictive Modeler (Treenet)
- Github, Bitbucket - version control

#### COMPUTER

- AWS: EC2 & S3 for SAS and R
- Azure: Setting up linux virtual machines for shiny deployment
- Linux and Windows cmd: Process automation

# Achievements

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## CIMB Data Science Challenge

KL, Malaysia

CHAMPION – WINNER OF RM 12,000

Aug. 2016

- Worked in a group of 3 while competing with 51 other teams to build the best business proposal using statistical analysis. Competition lasted 24 hours.
- Worked with SAS Programming (Enterprise Miner & Enterprise Guide) to analyze large data sets and develop predictive models to assist in decision making.
- Raw data consisting of customer information was given to each team. The data stipulated actual data (dirty and unorganized). Microsoft Excel and SAS Enterprise Guide were used for data cleansing and table merging.
- SAS Enterprise Miner was used to analyze the clean data and to develop predictive models, i.e: Tree, Neural Network, Regression.
- The results from the model were used to build a business proposal (targeted marketing) and to show how impactful would it be.

## Sunway Excellence Scholarship

KL, Malaysia

FULL SCHOLARSHIP

Mar. 2014

- All tuition and exam fees were sponsored by Sunway University. Only 1 or 2 recipients per intake.

# Education

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## BSc (HONS) in Actuarial Science

PJ, Malaysia

SUNWAY UNIVERSITY

Mar. 2014 - Mar. 2017

- First Class Honors, Cumulative Grade Point Average (CGPA): 3.93/4.00

## South Australian Matriculation

Penang, Malaysia

DISTED COLLEGE

Jan. 2012 - Dec. 2012

- Attained Australian Tertiary Admission Rank (ATAR) – 94.40

## O-Level/ Sijil Pelajaran Malaysia (SPM)

Johor, Malaysia

HIGH SCHOOL MUAR

2007 - 2011

- English, Mathematics, Further Mathematics, Physics, Chemistry, etc – 10As

# Others

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## Professional Qualification

CASUALTY ACTUARIAL SOCIETY – US BOARD FOR ACTUARIAL MEMBERSHIP

- Exam Probability (P)
- Exam Financial Mathematics (FM)
- Exam Models for Financial Economics (MFE)
- CAS Online Course 1: Risk Management and Insurance Operations
- CAS Online Course 2: Insurance Accounting, Coverage Analysis, Insurance Law, and Insurance Regulation
- VEE Economics, Corporate Finance, Applied Statistics

## Other experience

SUNWAY UNIVERSITY STUDENT COUNCIL

Mar. 2014 - Mar. 2016

- Co-Organizer of event “Unheard; Unseen; Unforgotten” in collaboration with National Cancer Society Malaysia (NCSM), Dialogue in the Dark (DID), and Refuge for the Refugees (RFTR).
- Conducted shaving event to raise cancer awareness amongst students.
- Conducted food drive and merchandise selling to raise donation funds.

# Referees

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## Wong Li Kuan

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Credits to rOpenSci. I created this CV using their vitae R package. Codes are on my Github account