# **Chamal Gomes**

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# Career Objective

An enthusiastic and energetic actuarial student who enjoys solving real world problems. I am focused on becoming a fully qualified actuary and am keen to deploy my excellent business acumen in a successful actuarial career specializing in advance inference and predictive analytics.

# **Higher Education**

## Master of Commerce | 2018—expected July 2019

University of Melbourne

Major: Actuarial Science Research

Deeplearning.ai|2019

5-course deep learning specialization

Bachelor of Commerce 2015-2017

University of Melbourne Major: Actuarial Science

#### **Awards**

University of Melbourne Commerce Global Scholarship 2015 University of Melbourne USA travel Scholarship

2017

**Institute of Actuaries Australia** 

Exemptions for CS1, CM1, CB1, CB2

#### Skills

- · Proficient Machine Learning and Deep Learning skills for data science applications
- Reinforcement learning skills required at advanced model simulation
- Strong coding ability both in producing clean and efficient code as well as debugging and understanding large code bases
- · Experience in General Insurance Actuarial liability valuation and RBC assessment.
- · R-Shiny for enhanced client presentations

- · Python, NumPy, Pandas, Sklearn.
- · TensorFlow and Keras Deep learning frameworks
- R for Machine Learning and statistical analysis
- · VBA for Automation of Microsoft suite applications
- · SQL database management and information modelling skills
- Unix Shell scripting for Unix task automation
- Experienced use of modern source control (Git)
- · HTML for web development
- · PowerBI for visualization

## Work Experience

#### INDEPENDENT CONTRACTOR FOR DEEP LEARNING MODEL DEVELOPMENT (FEB 2019 - APRIL 2019)

- · Developing deep-learning models for a European client of NMG Consulting for fraud detection.
- · Programming of python modules for deep-learning models and supervised models.
- · Preparation of the project report to be presented to the client.
- · Presenting key findings to the client upon completion of the project.

#### NMG CONSULTING (DEC 2018 - FEB 2019) - Actuarial Intern

- · VBA automation of RBC calculation, valuation and Industry benchmarking.
- Engagement in R-Shiny projects for enhanced industry client presentations.
- · Assisted actuarial analysts with valuation and solvency calculation for general insurance clients.

### Master's Research Thesis

## Application of Deep Autoencoders And Boltzman Machines for Insurance Claims Fraud Detection

- · Determining the optimal architecture and algorithm for fraud detection
- Comparison of supervised learning methodologies against the performance of Autoencoders and Boltzman machines in fraud detection.
- · Proposing new inference methodologies, allowing greater insight.

# **Projects**

## EY NextWave Data Challenge 2019

- · Smart city traffic modeling based on telematics data.
- · Methods under consideration include Extended Kalman Filter; Simultaneous Localization and Mapping (SLAM)

## **Kaggle Microsoft Malware Detection Competition**

· Stacked RBM for better performance in an autoencoder framework.

## **Kaggle LANL Earthquake Detection Competition**

· Use of Neural ODE along with RNN(LSTM) methodologies for time series prediction.

# **Kaggle Quora Insincere Question classification Competition (Ongoing)**

· Use of Bidirectional RNN for enhanced NLP modelling.

## SOA (Society of Actuaries) case study challenge (2018) (link)

• Provided actuarial modelling to estimate the inflows and outflows of the long-term care system, taking into account improving mortality, care levels transitions, economic trends, caregiver shortage etc.

## UBS Investment Banking Challenge (2018) (link)

- · Advised TABCORP on the merits of the potential acquisition of Tatts.
- · Recommended acquisition price using different valuation methods.

#### Bachelor final year project (2017)

• Provide recommendations to maintain the financing of the superannuation funds, for both defined benefits and accumulation plan.