

# 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 advanced deep learning and predictive analytics.

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## Higher Education

**Master of Commerce:** Actuarial Science Research|  
Expected completion 2019 June  
University of Melbourne, Australia

**Bachelor of Commerce:** Actuarial Science|  
2017 University of Melbourne, Australia

### Awards

- University of Melbourne Commerce Global Scholarship 2015
- University of Melbourne USA travel Scholarship
- Institute of Actuaries Australia**
- Exemptions for CT1, CT2, CT3, CT5, CT7

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## Skills

- Proficient Machine Learning and Deep Learning skills for data science applications
- Strong coding ability both in producing clean and efficient code as well as debugging and understanding large code bases.
- Reinforcement learning skills required at advanced model automation.
- Experience in General Insurance Actuarial liability valuation and RBC assessment.
- R-Shiny for enhanced client presentations.
- Python, NumPy, Pandas, Sklearn.
- TensorFlow Deep learning framework.
- R for Machine Learning and statistical analysis
- VBA for Automation of Microsoft suite applications tasks
- 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

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## Work Experience

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

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

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

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

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## Master's Research Thesis

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

- Determining the optimal architecture and algorithm for fraud detection
- Comparison of other supervised learning methodologies against the performance of Autoencoders and Boltzman machines in fraud detection.

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## External Projects

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

- 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)**

- 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.

### **Kaggle Microsoft Malware Detection Competition (Ongoing)**

- Considering stacked Autoencoders for better performance along with my colleagues.

### **Kaggle Earthquake Detection Competition (Ongoing)**

- Use of Neural ODE along with RNN methodologies for time series prediction.