

## EDUCATION &amp; TRAINING

**University of Cape Town***Masters in Advanced Analytics and Decision Sciences**February 2015 to February 2017*

Thesis: Identifying Predictors of Evolutionary Dispersion with Phylogeographic Generalised Linear Models

Supervisors: Dr Miguel Lacerda, Dr Ben Murrell (University of California, San Diego)

Masters programme by coursework and dissertation. Selected coursework included: Machine Learning, Advanced Regression, Simulation and Optimisation, C++ Programming for Scientists and Engineers, Probability Theory. Coursework awarded with distinction. Thesis currently under examination.

*BSc Honours in Mathematical Statistics (First Class)**February 2014 to November 2014*

Thesis: An Application of Machine Learning to Stock Differentiation in the South African Fisheries

Supervisors: Assoc. Prof. Ian Durbach, Dr Melvin Varughese

Selected coursework in statistics included Analytics, Theory of Statistics, Time Series, and Multivariate Statistics. Completed multiple pure mathematics honours courses: Measure Theory, Topology and Functional Analysis.

*Bachelor of Science in Mathematical Statistics**February 2011 to November 2013*

Average Grade: 74.73/100

## SCHOLARSHIPS &amp; AWARDS

Member of global 2<sup>nd</sup> place team for Barclays Data Wars Hackathon *2015*

Class medal for Masters degree coursework

Honours degree awarded in first class *2014*Dean's Merit List (weighted average mark > 75%) *2013*Commerce Faculty scholarship *2012*

Dean's Merit List

Harry Allschwang entrance scholarship *2011*

Commerce faculty scholarship

Class medal for Evidence-based Management

Dean's Merit List

## EXPERIENCE

**University of Cape Town***Statistics Tutor**July 2016 to October 2016*

Tutored the third-year statistics major course STA3043S: Decision Theory and Generalised Linear Models, covering the foundations of Bayesian statistics and advanced modelling applications in R.

*Mathematics Tutor**February 2016 to October 2016*

Tutored the second-year pure mathematics major course MAM2000W, covering modules in linear algebra and advanced calculus. Helped to lead whiteboard workshops for the first-year pure mathematics major course MAM1000W.

*Head Statistics Tutor**February 2015 to November 2015*

Led a team of 24 tutors for the first year statistics major courses STA1000F and STA100S. The courses cover the foundations of statistical inference and regression, and use Excel as a platform for simulation and data manipulation. Coordinated and presented course material in weekly long workshops.

*Course Coordinator**June 2015 to July 2015*

Ran the online component of STA1000L winter school- responsible for the operation of the Vula site, setting tests and managing the forum for course material queries.

*Statistics Tutor**July 2014 to October 2014*

Tutored the third-year statistics major course STA3043S: Decision Theory and Generalised Linear Models.

## Programming and Technical

Extensive exposure & advanced proficiency in:

- Python
- R
- Excel
- L<sup>A</sup>T<sub>E</sub>X

Intermediate proficiency in:

- C++
- Julia
- SQL
- STATA
- VBA

## Problem Solving

- Multiple projects completed solving novel data-based problems – building analytical methods and tailoring analyses to specific scenarios.
- Integration of coursework in mathematics, applied statistics and computer science.
- Collaborative engineering of machine learning solutions during hackathon.

## Teamwork and Interpersonal

- Adaptation of statistical problem sets for presentation with teams of six tutors.
- Participation in weekly feedback and input from team of tutors.
- Delegation of responsibilities, planning and group brainstorming within student organising committees.

## Communication

- Presentation of course material to groups of 200 students in weekly statistics workshops.
- Management of fora and email correspondence for student queries. Intermediary between team of tutors and convenor.

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## PROFESSIONAL DEVELOPMENT

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<b>University of Toronto on Coursera</b> – <i>Neural Networks for Machine Learning</i>	<i>2017</i>
<b>Big Data University</b> – <i>Deep Learning with Tensor Flow</i>	<i>2017</i>
<b>University of Michigan on Coursera</b> – <i>Introduction to Data Science in Python</i>	<i>2017</i>
<b>University of Cape Town on Coursera</b> – <i>Julia Scientific Programming (with honours)</i>	<i>2016</i>

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## MEMBERSHIP OF PROFESSIONAL ASSOCIATIONS

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<b>South African Statistical Association</b> – <i>Full member</i>	<i>February 2015 to Present</i>
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## SOCIAL ENGAGEMENT

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<b>Reclaim The City</b> – <i>Campaign supporter and volunteer</i>	<i>February 2016 to Present</i>
Reclaim The City advocates for state-subsidised, affordable housing development in the Cape Town city bowl, and protects the rights of the poor to homes and remaining near the city.	

<b>Workers and Community Solidarity Fund</b> – <i>Organising committee member</i>	<i>October 2015 to Present</i>
Started at the University of Cape Town, WCSF fundraises to support worker and community activism.	

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## REFEREES

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Ian Durbach	Associate Professor, Statistics, UCT	ian.durbach@uct.ac.za
	African Institute for Mathematical Sciences	
Kenneth Rafel	Senior Lecturer, Mathematics, UCT	kenneth.rafel@uct.ac.za