

# Curriculum Vitae

Tamlin Love

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## Education

### MSc Computer Science by Dissertation

2020 - present

School of Computer Science and Applied Mathematics  
University of the Witwatersrand, Johannesburg, South Africa

### BSc Honours in Computer Science (with distinction)

2019

School of Computer Science and Applied Mathematics  
University of the Witwatersrand, Johannesburg, South Africa

### BSc Computer Science and Applied Mathematics (with distinction)

2016 - 2018

School of Computer Science and Applied Mathematics  
University of the Witwatersrand, Johannesburg, South Africa

### NSC IEB Matric Qualification

2011 - 2015

St John's College, Johannesburg, South Africa

## Projects and Published Works

### Learning Who to Trust: Policy Learning in Single-Stage Decision Problems with Unreliable Expert Advice

*Undergoing peer review*

In this research, supervised by Dr. Ritesh Ajoodha and Prof. Benjamin Rosman, we present a reinforcement learning algorithm for solving single-stage decision problems incorporating interactive policy advice from multiple experts, whose advice may or may not be reliable.

Link: [https://anonymous.4open.science/r/CLUE\\_SSDP-4425](https://anonymous.4open.science/r/CLUE_SSDP-4425)

### Building Undirected Influence Ontologies Using Pairwise Similarity Functions

*Published in 2020 International SAUPEC/RobMech/PRASA Conference*

This research, supervised by Dr. Ritesh Ajoodha, seeks to develop a set of algorithms to recover the undirected skeleton of an influence ontology for knowledge discovery purposes.

Link: <https://ieeexplore.ieee.org/abstract/document/9040984>

### Wrobot (Honours)

In this project, a system was developed to allow two Turtlebots to compete for possession of a ball. The project employed several techniques, such as colour detection, PRM, Dijkstra's Algorithm and PID control.

Link: [https://github.com/TheWronskians/capture\\_the\\_flag](https://github.com/TheWronskians/capture_the_flag)

### Wits Moodle Marker Extension (3rd Year)

This project extended the existing Wits Moodle marker plugin to incorporate real-time feedback, multiple marking servers and more support for Matlab.

Link: <https://github.com/TheWronskians/WitsMoodleMarkerExtensions>

## Skills

### Programming Languages

- Python
- Matlab
- Dart
- Java
- C
- C++
- JavaScript
- PHP
- SQL

Experience working with Flutter and Django.

### Computer Science

- Machine Learning
- Probabilistic Graphical Models
- Reinforcement Learning
- Computer Vision and Image Processing
- High Performance Computing (Open MP, CUDA and MPI)
- Algorithmic Analysis

### Languages

- English (home language)
- Italian (fluent)
- Latin (high school level)
- Afrikaans (high school level)

### Musical Instruments

- Trombone (ABRSM Grade 8)
- Guitar
- Tin whistle
- Bodhran

## Work Experience

### Software Developer

Full stack mobile app development

Clients: [Brandcartel](#)

2021

### Programming Assistant

Assisting with programming tasks for the Roedean School IT department

2019

### Tutor

Employed by the University of the Witwatersrand to tutor computer science across 1<sup>st</sup> to 3<sup>rd</sup> years in fulfilment of the Post-Graduate Merit Award

Appointed head tutor for Software Design 3<sup>rd</sup> Year and Reinforcement Learning Honours in 2020

2018 - 2021

### Assistant

Restructuring of data management systems for assets of the School of Physics at the University of the Witwatersrand

January 2018

### Musician (ad hoc)

Played trombone with the St John's Choir, the WA Mozart Choir, the Rand Symphony Orchestra, the Johannesburg Symphony Orchestra, Phoenix Big Band, Off the Record and the UP Youth Choir.

2016 - 2019

## **Community Service**

### **Musician**

*2017 - 2018*

Played trombone with the Guild Orchestra for the Golden Acres old age home

### **Web Designer**

*2015*

Designed and created a website for the Yeoville Community School

### **Assistant**

*2014 - 2015*

Worked in the Orange Grove Hospice book shop

### **Teacher and Assistant**

*2014 - 2015*

Worked with the Link Literacy Project at the Yeoville Community School, teaching English to Grade 2, 6 and 7 pupils & assisting with maintenance around the school

Completed a total of 146 hours of community service during high school (2011 - 2015).

# Academic Achievements

## University of the Witwatersrand

2019

- Awarded the Post-Graduate Merit Award
- Dean's List

2018

- Liberty Life Gold Medal for outstanding performance in Computer Science
- Prize for Top Student in Computational & Applied Mathematics
- Herbert Le May Prize for the best 3rd year science student majoring in Applied Mathematics
- Dean's List
- Certificate of First Class for Formal Languages & Automata, Advanced Analysis of Algorithms, Computer Graphics & Visualization and Machine Learning
- Certificate of Merit for Computational and Applied Mathematics

2017

- Psybergate Computer Science prize
- Dean's List
- Certificate of First Class for Operating Systems, Abstract Mathematics and Linear Algebra
- Certificate of Merit for Computational & Applied Mathematics, Database Fundamentals, Mobile Computing, Computer Networks, Analysis of Algorithms and Introduction to Mathematical Statistics

2016

- Member of the Golden Key International Honour Society
- Dean's List

## St John's College

2015

- 8 distinctions in the 2015 NSC IEB Matric Examinations with an aggregate of 90%
- 5 Colours: Music, Academic, Drama, Public Speaking & Cultural
- 2 Honours: Academic, Music
- House Prefect
- Elected Head of Brass Band
- Matric Latin & English Subject Prizes
- Ranked in the top 100 Gauteng students in the Maths Olympiad

2014

- Part of a team which ranked in the top 16 international projects in the CERN Beamline challenge
- Awarded Gold for the De Beers English Olympiad
- Walter Webber Essay Prize
- Gold Medal for the best English candidate for the University of New South Wales' International 2014 benchmark test in Southern Africa
- President's Award (Bronze)

2013

- Published in the English Alive Anthology

2011 – 2015

- Awarded an Academic Merit Certificate (over 80% aggregate) every term from Grade 8 to Matric

# Extra-Curricular Achievements

## University of the Witwatersrand

2019

- **Astronomy**
  - Elected Secretary of the Wits Astronomy Club
- **Computer Science**
  - Google Hashcode participant
- **Music**
  - 1st Trombone in the Johannesburg Symphony Orchestra & 2nd Trombone in the Phoenix Big Band

2018

- **Applied Mathematics**
  - Placed 2nd in the SAMMC competition for mathematical modelling
- **Computer Science**
  - Participated in the Deloitte Hackathon

## St John's College

2015

- **Music**
  - Passed ABRSM Grade 8 Trombone with Distinction; Passed ABRSM Grade 6 Theory with Merit
  - Played 1st trombone for the St John's Orchestra, Big Band, Brass Band, Wind Band and Jazz Octet Won 1st prize in the brass category in the Roedean Lovemore-Yamaha Music Competition
  - Was selected as first trombone for the National B Band at the Grahamstown Jazz Festival Organized, conducted and composed music for Alston House in the Inter-House Music festival
- **Public Speaking and Creative Writing**
  - Won the Muhammed-Ismael Bulbulia Prize for Excellence in Creative Writing
  - Won the O'Dowd Public Speaking competition
  - Part of a team of three which won the 2015 Inter School POP Poetry Competition
  - Member of the Scribbler committee responsible for editing the school's creative writing magazine.
- **Drama**
  - Awarded the Andrewes Drama Award for the most sustained and outstanding commitment to drama from Grade 8 to Matric
  - Produced the Alston house play.

2014

- **Drama**
  - Organised the Alston Inter-House Poetry Slam team
- **Sport**
  - Provincial Colours in Gauteng for Mind Sports (DBA)
  - Winner of Gauteng Schools DBA tournament

2013

- **Sport**
  - Captain of 5th Hockey

2011 – 2015

- **Drama**
  - Acted in numerous school plays, Inter-House plays and presented many skits for the Grobs festival.
- **Sport**
  - Participated in school Hockey, Basketball and Cricket