



Shane Weisz

UCT Computer Science
Honours Student

- February 16, 1999
- 7 Akkerdal Ave, Claremont, Cape Town, South Africa
- shaneweisz@gmail.com
- +27 82 674 7874
- www.shaneweisz.com
- linkedin.com/in/shaneweisz
- github.com/shaneweisz

About Me

I am passionate about all things maths, stats, programming and technology – and leveraging these to solve real-world problems.

I'm fascinated by machine learning, artificial intelligence, data science, software development and related fields.

I am hard-working, driven, and always eager to learn new skills and technologies.

Personal Strengths

- Problem Solving
- Logical Decision Making
- Reliability
- Attention to Detail
- Time Management
- Empathy

Interests



Education Qualifications

- 2020 – **BSc Honours in Computer Science** University of Cape Town
present Research project: *A Comparative Evaluation of Deep Learning Approaches to Online Network Traffic Classification for Community Networks*
- 2017 – **BSc in Computer Science, Mathematics, and Mathematical Statistics (GPA: 95.96)** University of Cape Town
2019 The degree was awarded with distinction in all three majors, and the degree with distinction (see UCT Transcript [here](#) and reference [here](#))
- 2012 – **IEB Matric Certificate (Average: 97%)** St David's Marist Inanda
2016 St David's Dux Scholar, and named as an IEB Outstanding Achiever (see Matric Certificate [here](#))

UCT Academic Accomplishments

- 2020 **Roderick Noble Scholarship**
Awarded for outstanding academic achievement and to encourage full-time postgraduate study and research based on work already completed
- UCT Council Honours Merit Scholarship**
NRF Postgraduate Scholarship
- 2019 **Graduated with a Qualification GPA of 95.96**
Including 100% for Mathematics I, II and III, and Statistics I and II.
- Class Medals (for Highest Achieving Student)**
- MAM3000W (Mathematics III)
 - STA3041F (Mathematical Statistics III)
 - CSC3002F (Computer Science III)
- Investec IT Scholarship (2019, 2020)**
Dr Jacob Burlak Memorial Scholarship
Awarded to the top student proceeding to Mathematics III
- 2018 **Class Medals (for Highest Achieving Student)**
- MAM2000W (Mathematics II)
 - STA2004F (Mathematical Statistics II)
 - STA2005S (Mathematical Statistics II)
 - CSC2001F (Computer Science II)
 - CSC2002S (Computer Science II)
 - INF2009F (Information Systems II)
- Corporate Awards**
- BSG Prize for Best Student in Computer Science II
 - Saratoga Prize for Top Systems Analysis Project
- 2017 **Class Medals (for Highest Achieving Student)**
- MAM1000W (Mathematics I)
 - STA1006S (Mathematical Statistics I)
 - ECO1010F (Microeconomics I)
 - ECO1011S (Macroeconomics I)
 - ACC1006F (Financial Accounting)
 - ACC2011S (Financial Reporting I)
- Corporate Awards**
- Bain Awards for Best 1st Year Business Science Student
 - SAICA Awards for Best Student in Accounting I
 - School of Economics Prize for Best Economics I Student
- UCT Vice-Chancellor's Scholarship**
Dean's Merit List (2017, 2018, 2019)

School Academic Accomplishments

- 2016 **Nine distinctions in the 2016 IEB Examinations**
Including 100% for Mathematics and Physical Sciences
- Average of 97% in the 2016 IEB Examinations**
Received 94% or above for all subjects

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Technical Stack

</> Python	● ● ● ● ●
</> Java	● ● ● ● ●
</> SQL	● ● ● ● ●
</> R for Statistics	● ● ● ● ●
</> Unix	● ● ● ● ●
</> Haskell	● ● ● ● ●
</> HTML, CSS, JavaScript	● ● ● ● ●

Coursework

🏛️ Computer Science Modules
🎓 Artificial Intelligence
🎓 Data Structures and Databases
🎓 Theory of Algorithms
🎓 Networks and Operating Systems
🎓 Parallel Programming
🎓 Compilers
🎓 Functional Programming
🎓 Evolutionary Computing & Meta-Heuristics
🏛️ Statistics & Machine Learning Modules
🎓 Statistical Theory & Inference
🎓 Stochastic Processes & Time Series
🎓 Generalized Linear Models
🎓 Bayesian Analysis
🎓 Machine Learning
🎓 Analytics
🏛️ Mathematics Modules
🎓 Advanced Calculus
🎓 Linear Algebra
🎓 Abstract Algebra
🎓 Real & Complex Analysis
🎓 Discrete Mathematics
🎓 Graph Theory

Certifications

🏛️ Coursera Deep Learning by Andrew Ng
🎓 Neural Networks and Deep Learning
Improving Deep Neural Networks:
🎓 Hyperparameter tuning, Regulariza-
tion and Optimization
🎓 Structuring Machine Learning
Projects
🎓 Convolutional Neural Networks
🔍 Golden Key Society Member

Named as an IEB Outstanding Achiever

Ranked in the top 1% of students for English, Afrikaans, Maths, AP Maths, History, Accounting, Life Orientation and Physical Sciences.

St David's Subject Prizes for Top Student

For English, Maths, AP Maths, History, Accounting, Life Orientation, Physical Sciences and Information Technology.

The Malcolm Williams Trophy for English Creative Writing

Full Colours and Specific Honours for Academics

2015	Ranked within top 1% of learners in Grade 11 IeBTs Thinking Skills, Physical Sciences, Mathematics and Critical Thinking
2014 –	St David's Dux Scholar
2016	Highest-achieving student in Grades 10, 11 and 12

Work Experience

June –	Data Science Intern	Isazi Consulting
July	Wrote Python and Bash scripts for the refinement of the Tesseract OCR	
2019	engine, by generating character-level confusion matrices that are supplied	
	as weights to the Levenshtein string distance algorithm.	
2018 –	Tutor	Crimson Education
2020	Worked as a Skype-based tutor in IEB Advanced Programme Mathemat-	
	ics, Mathematics, Information Technology and Accounting, for South	
	African students signed up for Crimson Education's services.	
July	Programming Intern	Corion Capital
2017	● Coded various statistical modules and functions using Ruby – used for	
	equity benchmarking and option pricing.	
	● Wrote VBA code to automate and streamline internal processes.	

Extra-Curricular Achievements

Sport	Southern Gauteng Hockey U14A & U16A, and St David's 1st XI. Selected for Gauteng North Cricket, Gauteng Central Tennis and Rand Central District Soccer at various stages of my school career.
Coding Competitions	Solved 111 problems on <u>Project Euler</u> - a platform offering a series of challenging mathematical and programming challenges. This places me in the top 1% of over one million users. Top 5% in the ProHack 2020 Data Science Hackathon offered by McKinsey, optimizing the allocation of funds to countries so as to maximize predicted increase in country well-being.
Mathematics Olympiad	Reached the Final Round of the South African Mathematics Olympiad, and placed 3rd in Gauteng in 2015 and 2016. Member of the Southern Gauteng Mathematics Team that participated in the Southern African Interprovincial Olympiad. Mathematics Olympiad 2011 Provincial Winner – 1st in Gauteng.

Leadership Experience

Academic Portfolio Head	Head of the Academic Portfolio for the Bishops House in Matric and received Full Colours for Leadership. This contributed to being awarded General Honours – for Leadership, Academics, and Hockey (see reference from Deputy Headmaster here)
Volunteer Camp Counsellor	I volunteered for 8 weeks as a Madrich (counselor) at the Habonim summer camp over December 2017 and 2019, as part of a team supervising, leading, educating and inspiring a group of over 100 middle school children. Habonim Dror South Africa operates as a Public Benefit Organization with a focus on outreach and social development both within the Jewish and wider South African community (see reference from Secretary General here)

November 2020

Shane Weisz