

Jonathan Daniel Botha

COMPUTER SCIENCE · COMPUTER VISION · CYBERSECURITY · FULLSTACK DEVELOPER

Stellenbosch, Western Cape, South Africa

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Summary

I am currently a Computer Science Honours student who is passionate about learning and exploring every aspect of my field, and occasionally other fields. I studied a BSc (Mathematical Sciences) (Computer Science) at Stellenbosch University and graduated *cum laude* in 2019. I have also represented Stellenbosch in programming competitions throughout my years of study and engaged with companies through internships. Cybersecurity, machine learning, blockchain and optimization are some of the topics these experiences have introduced me to. Aside from academics I try to live a balanced lifestyle in order to achieve my best in all spheres of life. This lifestyle includes Ballroom and Latin-American at Stellenbosch University and forming part of multiple leadership structures, for example youth groups and university society leadership. In general, I have found myself to be very focused on my passions and continuously strive to learn and excel where I can.

Work Experience

RoomGuard

WEB DEVELOPER (PART-TIME)

South Africa

June 2020 - Nov 2020

- Design and develop a Wordpress website.
- Create custom WP plugins to modify limiting frameworks.

CPDPod

WEB DEVELOPER (PART-TIME)

South Africa

March 2020 - Nov 2020

- Design and develop a Wordpress website.
- Create custom WP plugins to enable Xero & Payfast integration.

Entersekt

STRATEGY INTERN

Stellenbosch, South Africa

June 2019 - July 2019

- Researched Cloud Machine Learning platforms.
- Implemented a variety of *Computer Vision* techniques.
- Worked with *OpenID Connect* as an identity provider.

Textrader

WEB DEVELOPER (PART-TIME)

South Africa

2017 - Aug 2019

- Design and develop a full stack website.
- Maintain and update the TexTrader website.

Fintec Labs

INTERN

Stellenbosch, South Africa

Jun. 2018 - Jul. 2018

- Participate in a shortened *Sprint*.
- Implement an AI platform capable of *Natural Language Processing*.
- *Integrate* the platform into other services e.g. Slack and Whatsapp.

ZenAptix

INTERN

Stellenbosch, South Africa

Jun. 2017 - Jul. 2017

- Research a new framework for *microservices*.
- Implement the new framework in a test project.
- Create and present a *full demo* of the results.

Maties Ballroom and Latin-American Dance Society

WEBSITE AND SOUND MANAGER (VOLUNTEER)

Stellenbosch, South Africa

Aug 2017 - Aug 2019

- Design and develop a full stack website.
- Develop an *NFC authorization mobile app* and backend.

El Shaddai Christian Youth

CO-HEAD OF ACTIVITIES (VOLUNTEER)

Durbanville, South Africa

2013 - 2016

- Organise or create a new activity weekly.
- *Present* activities to the group of roughly 80.
- Organise certain major events.

Education

Stellenbosch University

BSC (MATHEMATICAL SCIENCES) (COMPUTER SCIENCE)

- **Average result:** 83.4%
- **8 Distinctions**

Stellenbosch, South Africa

Jan. 2017 - Dec. 2019

Fairmont High School

NATIOANL SENIOR CERTIFICATE

- **Average result:** 88%
- **6 Distinctions**

Durbanville, South Africa

Jan. 2012 - Nov. 2016

Honors & Awards

NATIONAL

2018	2nd Place , SANREN Cyber Security Challenge 2018	South Africa
2018	Stellenbosch University Finalist , Standard Bank Tech Impact Challenge	South Africa
2017	1st Place , SANREN Cyber Security Challenge 2017	South Africa
2017	Stellenbosch University Finalist , Standard Bank Tech Impact Challenge	South Africa
2017	3rd Place , Hackfu Online 2017	South Africa

LOCAL

2017	10th Place , ICPC ACM South African Regionals	Western Cape, South Africa
2016	2nd Place , Top provincial student in IT (NSC)	Western Cape, South Africa
2016	Academic Honours with Distinction , Fairmont High School	Western Cape, South Africa

Notable Projects

2020	Bitspace (Twitter clone) , Functional Programming group project with flexible specifications,	Haskell, Neo4j
2020	Haskell A* implementation for Pancake Sorting , Extra effort on top of an assignment for computing optimal pancake sorting sequences,	Haskell, Neo4j
2020	Search and Planning , Frameworks that focuses on game tree searching,	Java
2020	Tensorswarm , GPU-enabled Tensorflow implementations of particle swarm algorithms,	Python
2019	Fragments , A framework for high-performance data aggregation,	NodeJS, Couchbase
2018	Nyx AI , A platform to connect NLP and APIs,	NodeJS
2018	MBLDS Scanner App , NFC authorization mobile app and backend.	ionic
2017	Kibbler , Create a codebase to interact with the existing RTSP protocols of a pocket drone.	Java
2018	TexTrader , A Notes and Textbook trading site	PHP
2017	Metazombies , A full website project used to manage a zombie apocalypse role-playing event.	PHP
2016	Personal 3D Simple Game Engine , Game engine for basic component-oriented systems and 3D graphics with FBOs and deferred lighting.)	Java
2015	Uniform Game Engine , Java library for 2D graphics games (using Swing)	Java