# Benjamin Sturgeon

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#### **EXPERIENCE**

#### **SINGULAR SYSTEMS** | DEVELOPMENT INTERN

November 2018 - December 2018 | Cape Town, WC

- Developed a full-stack solution to display Airbnb property locations in Cape Town within a google maps framework.
- Worked within a team to develop automated website testing systems for long-term clients.

# RHODES UNIVERSITY IT | TECHNICAL STUDENT HELP-DESK SUPERVISOR

September 2018 - November 2019 | Rhodes University, EC

- Oversaw the proper interaction of student technicians with clients.
- Conducted a significant number of interviews for 2 years of help-desk applicants.
- Helped to systematise more commonplace solutions by creating and propagating guides for users.

# **HALO WORLD** | ROBOTICS AND COMPUTER VISION INTERN January 2020 - April 2020 | Tokyo, JP

- Created a system for robots to detect obstacles within a certain distance threshold using ROS and intel Realsense.
- Created a deep-learning model for an autonomous, concrete smoothing robot for quality control.

# **CARSCAN** | COMPUTER VISION AND DEEP LEARNING INTERN May 2020 - August 2020 | Johannesburg, GP

- Spent time researching and building neural nets for the purpose of OCR in the context of car dashboards.
- Researched methods of deploying neural nets on edge devices and successfully deployed OCR project to android mobile device.

### **PROJECTS**

### ODOMETER OCR | Carscan Internship Project

June 2020 - August 2020 | Johannesburg, GP

- Built a deep learning app from end to end designed to parse and read odometer values from a car dashboard.
- Annotated learning data for 2 different models.
- Experimented with multiple frameworks to achieve high accuracy in the final result.

## **RESEARCH**

# $\textbf{LINUX RNG SECURITY ANALYSIS} \hspace{0.2cm} | \hspace{0.1cm} \textbf{FINAL YEAR THESIS FOR} \hspace{0.1cm}$

**COMPUTER SCIENCE HONOURS** 

Feb 2019 - November 2019 | Rhodes University, EC

- Wrote a literature review surveying the current vulnerabilities in the Linux RNG system and analysing the most promising solutions to those vulnerabilities.
- This research included extensive work done in the testing of RNGs within virtual machines in minimal entropy environments.

#### **EDUCATION**

#### **RHODES UNIVERSITY**

BACHELOR OF SCIENCE HONOURS IN COMPUTER SCIENCE Received Dec 2019 | Grahamstown, EC BACHELOR OF ARTS HONOURS IN PHILOSOPHY Received Dec 2018 | Grahamstown, EC Dean's List (First year)

# SKILLS

#### **PROGRAMMING**

Confident: Python Familiar:

F# • JavaScript • C# • C++ • Java Some experience: VHDL

#### **TECHNOLOGY**

Git • VMware workstation Windows •Linux(Ubuntu/Debian) Pytorch • Tensorflow ROS • Vivado

### **COURSEWORK**

#### **GRADUATE**

Computer science:
Machine Learning
Security
Hardware Logic Design and Analysis
Computer Architecture
Parallel and Distributed Processing
Computer Vision

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Philosophy: Philosophy of Education Philosophy of Work Philosophy of Life

#### **UNDERGRADUATE**

Functional Programming Programming styles Operating Systems Compilers

#### **LINKS**

Github:// BenSturgeon LinkedIn:// Benjamin Sturgeon Codewars:// Abraxasu