

# Jehan Singh

## Curriculum Vitae

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### Personal Details

- Name: Jehan Singh
- Email: jehansingh.97@gmail.com
- Alternate Email: sngjeh001@myuct.ac.za

### Personal Profile

I am a third-year Electrical and Computer Engineering student at the University of Cape Town. I am an adaptable person, and I can take on a wide variety of tasks in whatever role I find myself performing. I have a particular interest and experience with Linux systems administration and operations, especially with regards to cluster computers and high-performance computing. I am interested in embedded systems and I am generally capable within the field of computer science. I believe that I can find useful solutions to problems.

I have started working on small personal projects in my spare time, which can be found on my GitHub at <https://github.com/KaliumPuceon/> and I also have some experience with basic website design, which can be seen on my personal website, <https://awful.cloud/>

### Education

- 2016-present: Studying towards BSc. Eng. in Computer Engineering at the University of Cape Town
- 2015: Graduated from Northcliff High School with distinctions in Mathematics, Information Technology, Life Sciences, Physical Sciences, and Life Orientation, as well as a merit in Advanced Program Mathematics

### Work Experience and Notable Projects

#### Winning Student Cluster Competition ISC 2019

- Competed in and won the ISC Student Cluster Competition 2019 along with my team on behalf of the Centre for Scientific and Industrial Research

- Placed first out of 14 teams:  
<https://www.chpc.ac.za/index.php/news2/241-south-africa-wins-international-student-cluster-competition-for-the-fourth-time>
- Designed, prepared, optimized and ran benchmarks on a six-node cluster
- Reference: David Macleod [dmacleod@csir.co.za](mailto:dmacleod@csir.co.za)

## **Penguin Data Collection Project**

- Designed, programmed and integrated a Raspberry Pi based embedded system for collecting images of penguins on St. Croix Island in May 2019
- Developed software which must be robust enough to run unchecked for up to six months and recover from failures
- Integrated and adapted system to support and fit with other research systems
- I wrote a blog post about this, you can find it here:  
[https://awful.cloud/blog/penguin\\_science](https://awful.cloud/blog/penguin_science)
- Reference: Justin Pead: [justin.pead@uct.ac.za](mailto:justin.pead@uct.ac.za)

## **Vacation work at ABSA Aliens**

- A two-week placement at the ABSA Aliens in January 2018
- Prototyped a system for locating a device within a building based on pre-existing wi-fi networks, the initial prototype can be found here:  
<https://github.com/KaliumPuceon/FieldMap>
- Learnt valuable skills for working with a team during development
- Reference: Alwyn van Wyk: [alwyn.vanwyk@absa.co.za](mailto:alwyn.vanwyk@absa.co.za)

## **Undergraduate internship at MWR Information Security**

- A two-week training internship with MWR Information Security, Johannesburg in December 2017
- Received training and experience with webapp security as well as in formal reporting on such faults
- Gained basic familiarity with a variety of security testing tools
- Reference: Brian Schirmacher: [brian.schirmacher@mwrinfosecurity.com](mailto:brian.schirmacher@mwrinfosecurity.com)

## **Vacation work at JourneyApps, Stellenbosch**

- Three-week vacation work placement at JourneyApps Stellenbosch, July-August 2017
- Worked on NodeJS API server wrapper to reduce the number of API calls needed
- Gained familiarity with asynchronous javascript programming
- Reference: Rudolf Meijering: [rudolf@journeyapps.com](mailto:rudolf@journeyapps.com)

## **Skills**

- Experience using the programming languages and tools Python (including scientific computing packages), Lua, Pascal, and Linux Shell Scripting tools.
- Elementary or Basic knowledge of C, NodeJS, Java, including some Android development, HTML, CSS, and SQL
- Significant experience with Linux system administration and environment management across a variety of distributions and environments, including Linux cluster environments and web servers
- Competent user of both Microsoft Office packages and LaTeX document creation tools
- Competence with both Windows and GNU/Linux Operating Systems
- Experience with electronic construction and design
- Capable of quickly learning about new tools or systems as needed
- Skill at working with technical equipment or documents

## **Additional Achievements**

- Led the team that placed 1st in the 2018 South African Student Cluster Competition
- Placed fourth nationwide in the 2015 SAIP Physics Olympiad
- Part of the team that placed 1st nationwide and 27th worldwide at the World Robotics Olympiad 2013, Jakarta.
- Highest scoring student at World Scholar's Cup: South African round, 2015