

# Thuso Tshishonga

## PERSONAL PROFILE

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Place and Date of Birth: Vuwani, Limpopo | 03 January 1994

Full Name: Thuso Raymond Tshishonga

Nationality: South African

Gender: Male

Home Language: Tshivenda

Other Languages: English

Driver's License: Code C1

## CONTACT DETAILS

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Physical Address: Scheiding Street, Pretoria Central

Cellphone: 067 030 2752

Next of Kin: 072 5740 210

Email: [tshishongatr@gmail.com](mailto:tshishongatr@gmail.com)

LinkedIn Profile: <https://linkedin.com/in/thuso-tshishonga-077723115>

Online Portfolio: <https://thusotr.github.io>

GitHub Page: <https://github.com/ThusoTR>

## EDUCATION

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### *Undergraduate Studies*

- Qualification: BSc Electrical Engineering | [Certificate attached](#)
- Institution: University of the Witwatersrand, Johannesburg
- Period: February 2013 – March 2018

### *Basic Education*

- Qualification: National Senior Certificate | [Certificate attached](#)
- Institution: Edison Nesengani Secondary School
- Period: January 2008 – December 2012

## WORK EXPERIENCE

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### *Trainee Engineer at Reutech Communications (From 01 April 2020 to date)*

- Design, simulation, and building prototypes of electronic circuits for filtering, signal amplification, and transistor switching applications. Writing Arduino microcontroller software to control the functionality an attenuator and a power amplifier test jig.
- Performing RF test measurements to assess antenna impedance response, matching transformers performance, RF amplifier performance, and inductor impedance response using RF instruments such as a vector network analyzer, vector impedance machine, and a spectrum analyzer.

### *Engineer in Training (From 03 June 2019 to 31 March 2020)*

#### **Armaments Corporation of South Africa SOC Ltd (ARMSCOR)**

Practical training at ARMSCOR included the following:

- Development of an antenna tuning unit. Main responsibilities included performing design calculations for capacitor/ inductor matching circuits, matching transformers, design and implementation of antenna simulator.
- Design of a direct current (DC) power supply unit (PSU). Main responsibilities included the development of the PSU schematic and the development of a veroboard prototype circuit of the PSU.

## **WORK EXPERIENCE** (continued)

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**Engineer in Training** (From 01 March 2018 to 31 May 2019)

**Armaments Corporation of South Africa SOC Ltd (ARMSCOR)**

Company seconded to for practical training: **Denel Dynamics**

Practical training at Denel Dynamics included the following:

- Implementation of a maximal length sequence (MLS) signal generator. Key responsibilities for writing a VHDL program that generates the MLS using a Xilinx FPGA.
- Building a RepRap Prusa i3 based 3D printer. Main responsibilities included building the physical structure of the printer, software configuration, calibration and fine tuning of the printer.
- Design and implementation of an attenuator driver circuit. Main responsibilities included the development of the schematic, building a prototype, and writing the associated ARM microcontroller software to control the attenuator driver.
- Phase lock loop design: Main responsibilities included the design and simulation of the respective loop filter and other phase lock loop parameters and subsystems. Phase lock loop was designed and simulated to meet the specific lock, stability, and modulation requirements.

**Vacation Work Student** (From 02 January 2018 to 28 February 2018)

**Armaments Corporation of South Africa SOC Ltd (ARMSCOR)**

- HAWK engineering officers training and exposure to aircraft maintenance: Training on the HAWK aircraft systems and exposure to the maintenance of these systems.
- Studying of application of neural networks towards simple and complex data. Working with MATLAB to analyze and improve predictions based on captured data.

## **SKILLS AND INTERESTS**

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Technical and general skills:

- Technical communication
- Software development
- Programming languages: C++, Python, JavaScript, HTML, C#
- Web development framework: Django
- Proficient in microcontroller software programming using C/C++ and assembly language.
- Simulation and analysis software: MATLAB, Excel, LTspice, and MultiSim.
- Good critical thinking and problems solving skills

Please visit my online portfolio website: <https://thusotr.github.io>

## **REFERENCES**

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Name: Bulelani Mdoyi

Company: Denel Dynamics

Occupation: Principal integration technologist

Contact number: 079 272 6596

Email: [Mdoyi@deneldynamics.co.za](mailto:Mdoyi@deneldynamics.co.za)

More references available upon request



REPUBLIC OF SOUTH AFRICA

# National Senior Certificate

Awarded to

**Thuso Raymond Tshishonga**

Identity number 9401035637082

Subject	%	Achievement level
Tshivenda Home Language	82	7
English First Additional Language	78	6
Mathematics	81	7
Life Orientation	77	6
Geography	73	6
Life Sciences	89	7
Physical Sciences	83	7
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This candidate is awarded the National Senior Certificate and has met the minimum requirements for admission to bachelor's degree, diploma or higher certificate study as gazetted for admission to higher education, subject to the admission requirements of the higher education institution concerned.

With effect from December 2012

**M. S. LAKOMETSI**

Chief Executive Officer

**130 2805 8268 F**



This certificate is issued without alterations or erasure of any kind



Council for Quality Assurance in  
General and Further Education and Training  
South Africa

**4025860**

(See reverse for more information)





# UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

At a congregation of the University  
held on 04 July 2018

*Thuso Raymond Tshishonga*  
was admitted to the Degree of

**Bachelor of Science in Engineering**  
(Electrical Engineering)

*[Signature]*  
Dean: Faculty of Engineering and  
the Built Environment

*[Signature]*  
Vice-Chancellor and Principal

*[Signature]*  
Registrar

