

# LEARN LEAGO CHILOANE

## Electrical & Information Engineering Honours Student

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in <https://www.linkedin.com/in/learn-chiloane-4b7255149> 🌐 <https://github.com/chiloanel>

## PROFESSIONAL SUMMARY

- Strong familiarity with programming languages: C++, JavaScript and Assembly.
- Practical design and operation of electrical machines (AC/DC-DC converters, three phase transformers, induction motors); using arduino for development projects.
- Knowledgeable with Mechanical Design and 3D CAD Software, Autodesk Inventor.

## EXPERIENCE

### Research Assistant

#### Transnet Matlafatšo Center (TMC)

📅 Nov 2019 – Feb 2020 📍 Gauteng, Johannesburg

- Developing an arduino project for a self-driving servo car which can detect and avoid obstacles in its path, with a wireless user-interface control feature.
- Researching on the Mofokeng technologies project, titled as “3D Printed Clamps Fittings on Roof Sheetings” and designing CAD drawings of the roof sheets using Autodesk Inventor.

### Laboratory Assistant

#### Genmin Laboratories, University of the Witwatersrand

📅 Dec 2018 – Feb 2019 📍 Gauteng, Johannesburg

- Designing and constructing an electrical off-grid solar system that helped in the development of the laboratories.
- Engaged on a different design project for understanding of proper utilization on electrical inverters.

## ACADEMIC ACHIEVEMENTS

### University of the Witwatersrand

📅 2018

- Top 15%

📅 2018

- Dean's List, Top 15%
- Barnato Halls of Residence Top Student (Position 1)

📅 2017

- University Entrance Scholarship
- Dean's List, Top 15%
- Knockando Halls of Residence Top Student (Position 2)

### Mpumalanga Matric Provincial Awards

📅 2016

- Top Student (Position 14)
- Best Applicant in Mathematics and Physical Sciences

### Lekete High School

📅 2016

- Mpumalanga Department of Education SAICA Camp Top 50 Applicant.
- Grade 12 Top Learner (Position 1).

## EDUCATION

University of the Witwatersrand,  
Johannesburg

### BSc in Engineering (Electrical)

📅 2017 - Present 📍 Gauteng, Johannesburg

- Year of Study: 4 of 4
- Main Courses: Electronics, Microprocessors, Software Development, Control, Power Systems, Signal & Systems, Power Engineering, Electromagnetic Engineering, Measurement Systems.

### Lekete High School

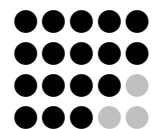
#### National Senior Certificate

📅 2012 - 2016 📍 Mpumalanga, Acornhoek

- Highest Grade Passed: Grade 12
- Main Subjects: Mathematics, Physical Sciences, Engineering Graphics and Design, Electrical Technology, Sepedi HL, English FAL.

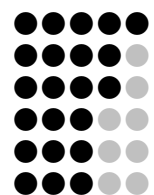
## LANGUAGES

English  
Sepedi  
Xitsonga  
isiZulu



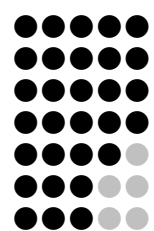
## PROGRAMMING

C++  
C  
Assembly  
JavaScript  
LaTeX  
MATLAB®



## SOFTWARE TOOLS

Multisim™  
LTspice®  
Microsoft® Office  
Git  
Arduino  
Autodesk Inventor®  
Simulink®



## ELECTRICAL MACHINES

AC/DC-DC Converter  
Induction Motor  
Three Phase Transformer



## LEADERSHIP/VOLUNTEERSHIP

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### Winter school organiser and tutor

📅 June - July 2017      📍 Lekete High School, Acornhoek

- Organised a winter school program for matric learners around Arthurseat circuit and tutored Mathematics and Physical Sciences subjects.

### Res mentor

📅 Mar 2020 – Present      📍 Wits University, Johannesburg

- Mentoring and tutoring first year Engineering students on how to navigate and survive in the university field. The courses tutored include all the first year Engineering courses.

## PROJECTS

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### Programming

- Designing and implementing an object-oriented arcade game such as Space Invaders using C++ (version 17) programming language.
- Designing and implementing the Buzzer game which involves the Arduino AVR micro-controller and various circuit components using assembly language.
- Designing games like X's and O's/ Tic Tac Toe and solving problems in hypothetical situations using C++ programming language.

### Electronics

- Designing and implementing a flyback dc-dc converter that emulates the characteristics of a lead acid battery.
- Designing and implementing an electronic circuit that models power production of a house's solar photo-voltaic and battery system.
- Designing and implementing a temperature control prototype that automatically maintains indoor space temperature within a specific range using temperature sensors, air cooler and LEDs.

## REFERENCES

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Mr. Moses Mogotlane

**Transnet Matlafatšo Centre Manager**

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Mr. Mashego D.D

**Lekete High School Teacher**

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