

LEARN LEAGO CHILOANE

Electrical & Information Engineering Honours Student

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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 an 'automatic servo car' which can detect and avoid obstacles, with a wireless app user-interface control feature.
- Researching on the Mofokeng technologies project, titled as "3D Printed Clamps Fittings on Roof Sheetings" and designing 3D 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

- Dean's List.
- Barnato Halls of Residence Top Student (Position 1).

📅 2017

- University Entrance Scholarship.
- Dean's List.
- 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

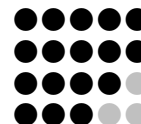
National Senior Certificate

📅 2012 - 2016 📍 Mpumalanga, Acornhoek

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

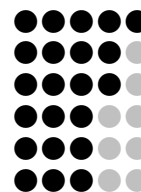
LANGUAGES

English
Sepedi
Xitsonga
isiZulu



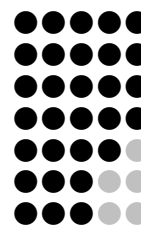
PROGRAMMING

C++
C
Assembly
JavaScript
LaTeX
MATLAB®



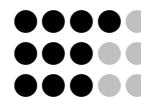
SOFTWARE TOOLS

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



ELECTRICAL MACHINES

AC/DC-DC Converter
Induction Motor
Three Phase Transformer



LEADERSHIP/VOLUNTEERSHIP

- Organised a winter school program for matric learners around Arthurseat circuit at Lekete High School and tutored Mathematics and Physical Sciences subjects (2 weeks).

PROJECTS

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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Lekete High School Teacher

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