LEARN LEAGO CHILOANE

Electrical & Information Engineering Honours Student

Barnato Hall, 1 Jan Smuts Avenue, Braamfontein, Johannesburg, 2000 leago89@gmail.com 060 337 7944
https://www.linkedin.com/in/learn-chiloane-4b7255149 https://github.com/chiloanel

PROFESSIONAL SUMMARY

- Strong familiarity with programming languages: AVR Assembly and C++.
- Practical design and operation of electrical machines (AC/DC-DC converters, three phase transformers, induction motors) and basic electrical tools.
- Knowledgeable with Mechanical Design and 3D CAD Software (Autodesk Inventor).

EXPERIENCE

Research Assistant

Transnet Matlafatšo Center (TMC), University of the Witwatersrand

Nov 2019 – Feb 2020 Gauteng, Johannesburg

- Developing a project for an Auto Ultrasonic controlled Car which involves the Arduino AVR micro-controller using C++ language.
- 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 prototype that helped in the development of the laboratories.
- Engaged on a different design project for understanding of proper utilization on DC-DC 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 ●●●●○
AVR Assembly ●●●●○
LaTeX ●●●○○
MATLAB® ●●●○○

SOFTWARE TOOLS

Multisim™ ●●●●●
LTspice® ●●●●●
Microsoft® Office ●●●●●
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

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.

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.

REFERENCES

Mr Moses Mogotlane

Transnet Matlafatšo Centre Manager

Direct Line: +27(0)11 717 7224
Cell: +27(0)83 510 3685
Email: moses.mogotlane@wits.ac.za

Mr Mashego D.D

Lekete High School Teacher

Cell: +27(0)83 256 0314 / +27(0)82 868 0505