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**FACULTY OF ENGINEERING AND
TECHNOLOGY
DEPARTMENT OF ELECTRICAL ENGINEERING
DIPLOMA IN ELECTRONICS AND ELECTRICAL
ENGINEERING**

**FINAL YEAR PROJECT REPORT
AN AUTOMATIC SOLAR CLEANING SYSTEM.**

BY:

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Final year project Report submitted to the Faculty of Engineering and Technology in partial fulfilment of the requirements for the award of Diploma in Electrical Engineering.

JUNE 2024

DECLARATION

I hereby declare that all the written material contained in this report is an account of our own efforts and has never been submitted to any university or institution for an academic award.

I wish to extend our sincere gratitude to the Almighty God for letting us finish our proposal ideas successfully.

SIGNATURE.....

DATE.....

EMOCU CHARLES

BU/UP/2022/1190

APPROVAL

This is to certify that Emocu Charles has successfully completed his final year report under the supervision of;

1. UNIVERSITY SUPERVISOR

Miss. Patience Tusiimire

Signature.....

Date.....

DEDICATION

I sincerely dedicate this report to my family members especially to our parents ie father, mother, and friends who have been of great support to us. I also dedicate it to our project supervisor, and to other lecturers may the almighty God bless you all.

ACKNOWLEDGEMENT

I am very thankful to the Almighty God who has blessed us with wisdom, knowledge and courage to achieve what he had promised and provided me this opportunity to fulfill our ambition.

I would like also to express our acknowledgement to my parents for everlasting love, dreams and sacrifices they made throughout their lives to make us see this day.

I could not find the appropriate words to properly describe our appreciation for their endless devotion, support and faith in our abilities in achieving our goals.

ABSTRACT

The goal of this thesis was to develop a laboratory prototype of a solar cleaning system, which is able to enhance the performance of the photovoltaic module in a solar energy system. The operating principle of the device is to keep the photovoltaic modules constantly cleaned which maximizes the exposure of solar panel to the Sun's radiation. As a result, more output power can be produced by the solar panel.

The work of the project includes hardware design and implementation, together with software programming for the microcontroller unit of the solar cleaner. The system utilized one L298D motor drive which works as the interface between microcontroller and motor.

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