FINAL YEAR PROJECT REPORT

SMART GRASS CUTTING MACHINE

In fulfillment of the requirement
For degree of
BEE (Electrical Engineering)

By

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2018-2022

DECLARATION

We hereby declare that this project report is based on our original work except for citations and quotations which have been duly acknowledged. We also declare that it has not been previously and concurrently submitted for any other degree or award at Bahria University or other institutions.

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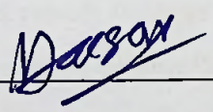
Signature : 

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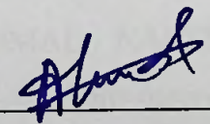
Signature : 

Date : 11-08-2022

Specially dedicated to
my beloved grand father, grand mother, mother and father
(MUHAMMAD NAEEM ASHRAF)
my beloved grand father, grand mother, mother and father
(MUHAMMAD HASSAN)
my beloved grandfather, grand mother, mother and father
(AHMED HASSAN)

ACKNOWLEDGEMENTS

We would like to thank everyone who had contributed to the successful completion of this project. We would like to express my gratitude to my research supervisor, Mr Zuhair Arfeen for his invaluable advice, guidance and his enormous patience throughout the development of the research.

In addition, We would also like to express my gratitude to our loving parent and friends who had helped and given me encouragement.

SMART GRASS CUTTING MACHINE

ABSTRACT

The project aims at fabricating a grass cutting machine system which makes the grass cutter motor running through solar energy. This solar power based Grass Cutting Machine is a robotic vehicle powered by solar energy that also avoids obstacles and is capable of cutting the grass through Android application. The system uses 12V 7AH battery to power the machine's motors movements as well as the grass cutter motor. A solar panel is used to charge the battery so that there is no need of charging machine externally. The grass cutter and machine's motors are interfaced to NodeMCU microcontroller that controls the working of all the motors. Arduino is interfaced to an ultrasonic sensor for obstacle detection. We can control machine's motors in forward, backward, right or left direction in case no obstacle is detected. On obstacle detection the ultrasonic sensor monitors it and the microcontroller thus stops the grass cuter motor to avoid any damage to the object/human/animal whatever it is and it also provides an alarm and machine stops to go forward. So, that's how we can protect environment from pollution.

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