



e-ISSN: 2278-8875

p-ISSN: 2320-3765

# International Journal of Advanced Research

in Electrical, Electronics and Instrumentation Engineering

Volume 13, Issue 4, April 2024

**ISSN** INTERNATIONAL  
STANDARD  
SERIAL  
NUMBER  
INDIA

**Impact Factor: 8.317**

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# Fabrication of Motorized Floor Cleaning Machine

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**ABSTRACT:** This project deals with the designing and fabrication of Motorized Floor cleaning Machine. The aim of this project work is to develop and modernized process for cleaning the floor with wet and dry. It is very useful for cleaning the floors. It can be used wet and dry; hence it is widely used in houses, hospitals, auditorium, shops, computer centers, etc. In modern days interior decorations are becoming an important role in our life. Cleaning of floor is a very important one for our health and reduces the man power requirement. Hence our project is very useful in our day to day life.

**KEYWORDS:** Photo Voltaic, Grid, Arduino, Converter, E-Vehicle

## I. INTRODUCTION

**Floor cleaner** is very much useful in cleaning floors in hospitals, houses, auditorium, shops, computer centers etc; it is very simple in construction and easy to operate. Anybody can operate this machine easily. It consists of moisture cotton brush, the brush cleans the floor and dries with aid of small blower. Hence it is very useful in hospitals, houses, etc. The time taken for cleaning is very less and the cost is also very less. Maintenance cost is less. Much type of machines is widely used for this purpose. But they are working under different principles and the cost is also very high.

In our project is very simple drive mechanism and easy to operate any persons. The size of the machine is also portable, so we can transfer from one place to other place very easily. The **floor cleaner** is simple, modern house holding device; even children can also operate it easily with safety. It is very important one for each and every houses and hospitals etc. Floor cleaning is a major occupation throughout the world. The main job of most cleaners is to clean floors. There is no machine in the markets which can be used on smooth as well as rough surface floors. Considering weight criteria, machine assembly, handling the machine is very flexible.

### 1.2 OBJECTIVE

The objective of the seminar to provide details specification of component in floor cleaner machine. To develop machine and easy and quick cleaning. To provide valuable and supportive services to the Society.

### 1.3 SCOPE

The machine may be modified in future by adding battery and automatic operating system because current design has few problems. Few of those are the space occupied by vacuum cleaner is maximum therefore there is no space is remaining for battery, water storage problem, motor is not detachable and the high rpm leads to vibration of the whole system. If these features will be modified, this will work well. Monitoring, self-charging, lighter bodyweight, are the future scope of this machine.

## II. COMPONENTS

### COMPONENTS AND SPECIFICATIONS:

- AC MOTOR
- DC MOTOR
- BRUSH
- WHEEL
- FRAME
- BELT



- PULLY
- ARDUINO
- HC05 BLUETOOTH

**BLOCK DIAGRAM**

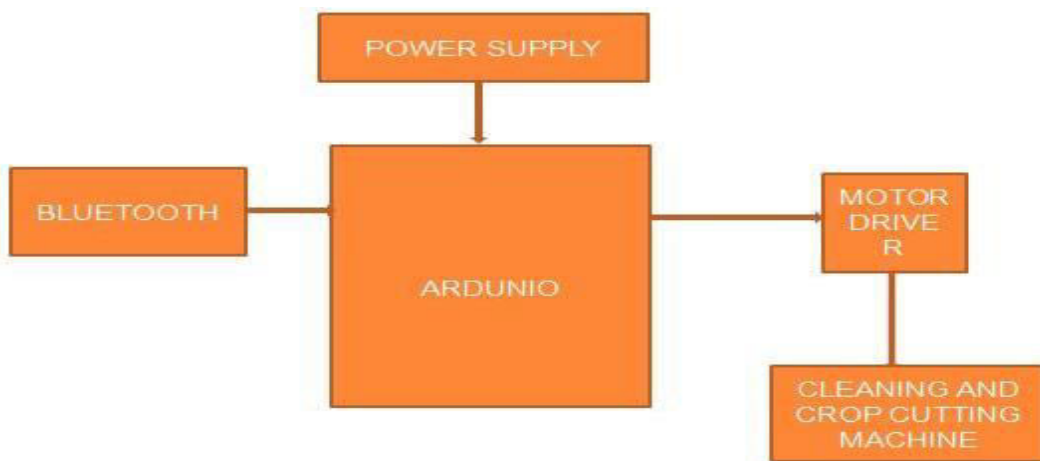


Fig -1: Block Diagram

**WORKING**

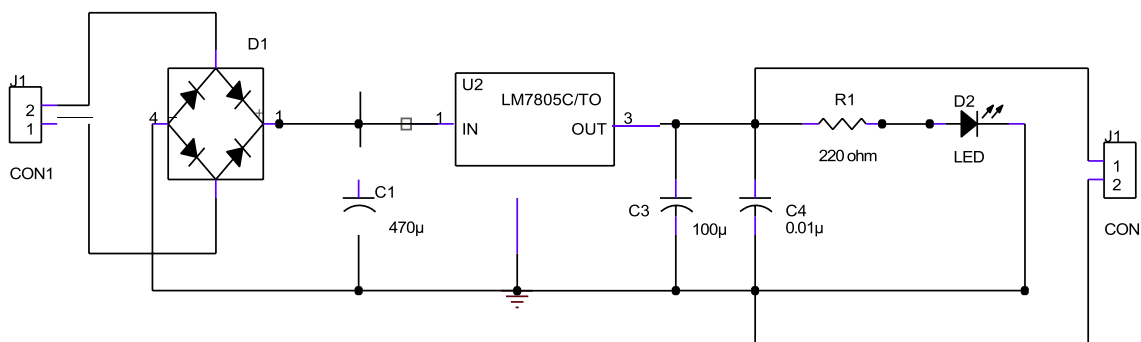
While you are running the machine, the automatic floor scrubber works hard to clean the floors. The automatic scrubber will distribute water inside the brush activating the cleaning solution, and then down through its solution tank to the solenoid valve. In basic terms, electric motors work by converting electrical energy into mechanical energy.

When this happens within a magnetic field, a force is generated which causes shaft rotation. Electric motors can be powered by alternating current or direct current forces, hence AC and DC motors. AC (Alternating Current) motors are commonly used in floor scrubber machines due to their reliability and low maintenance requirements.

DC motor: DC (direct current) motors are less commonly used, though they might be more efficient with better speed controls, depending on the requirement. The new automatic floor cleaner will save huge cost of labor in future.

The basic advantage of this product is that it will be cost effective and no human control is needed. Once put in on mode it will clean the whole room without any omission of surface.

**CIRCUIT DIAGRAM**





### III. RESULT AND DISCUSSIONS



**Fig -3: Hardware Kit**

### IV. CONCLUSION

The prototype was tested on the floor and it cleaned the floor automatically in an effective manner when compared to manual cleaning. The human effort required for cleaning large areas can be reduced by implementing this automatic floor cleaner. This project was designed and fabricated with an idea of simplifying and automating the process of floor cleaning. It was designed in such a way that it provides flexibility in operation and effortless cleaning at a reasonable budget. The design and fabrication was done in such a way that this machine could be operated by people of various age groups without any hassle. The automation helps the machine to operate without continuous human supervision. This project “MOTORIZED FLOORCLEANING MACHINE” is designed with the hope that it will be very much economical and helpful for industries, workshops and households.

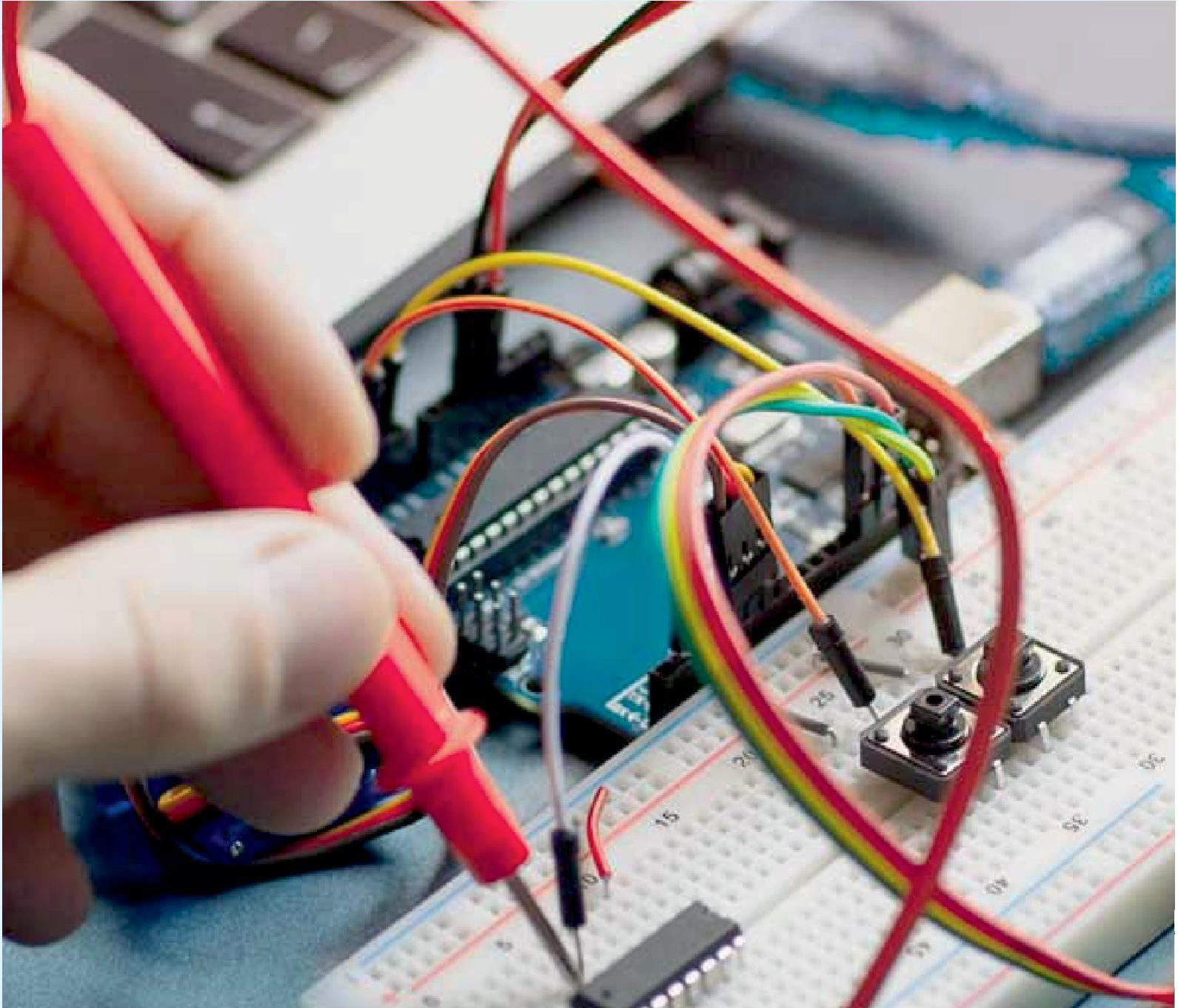
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