

SMART VACCUM MACHINE

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► PROBLEM STATEMENT

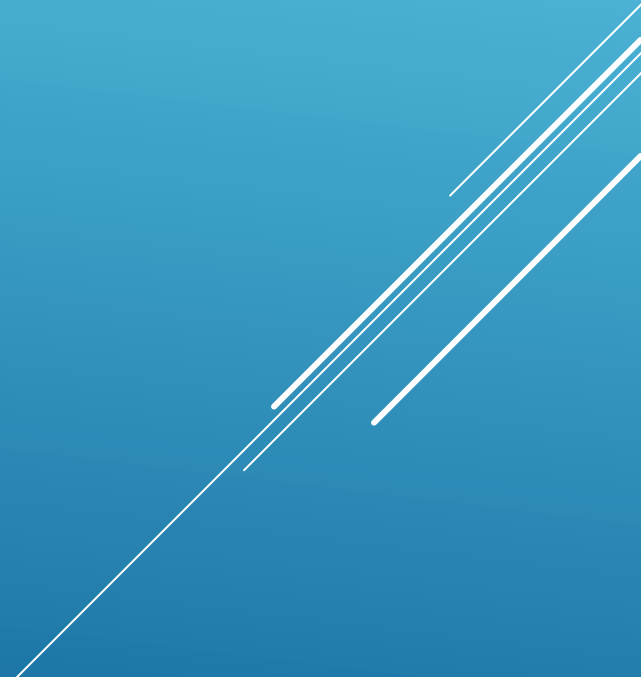
IN A PRESENT-DAY SCENARIO, WE ALL ARE SO BUSY WITH OUR WORK THAT WE DON'T HAVE THE TIME FOR CLEANING OUR HOUSE PROPERLY. THE SOLUTION TO THE PROBLEM IS VERY SIMPLE, YOU JUST NEED TO BUY A DOMESTIC VACUUM CLEANER ROBOT SUCH AS SMART VACCUM MACHINE WHICH WILL CLEAN YOUR HOUSE WITH THE PRESS OF A BUTTON. BUT SUCH COMMERCIAL PRODUCTS SHARE ONE COMMON ISSUE, WHICH IS COST. SO TODAY, WE DECIDED TO MAKE A SIMPLE FLOOR CLEANER ROBOT, WHICH IS NOT ONLY SIMPLE TO MAKE BUT COSTS VERY LESS COMPARED TO COMMERCIAL PRODUCTS AVAILABLE IN THE MARKET.

NEED STATEMENT

- ▶ ☐ Cleaning the wet and dry floors
- ▶ ☐ A floor cleaning assistant at home and offices
- ▶ ☐ Can clean the inaccessible areas like underneath of
- ▶ sofas bed and table.
- ▶ ☐ Small particles and can be picked up efficiently.
- ▶ V. LIMITATIONS
- ▶ ☐ Suitable only for flat surfaces.
- ▶ ☐ Semi automated.
- ▶ VI. FUTURE SCOPE

INTRODUCTION

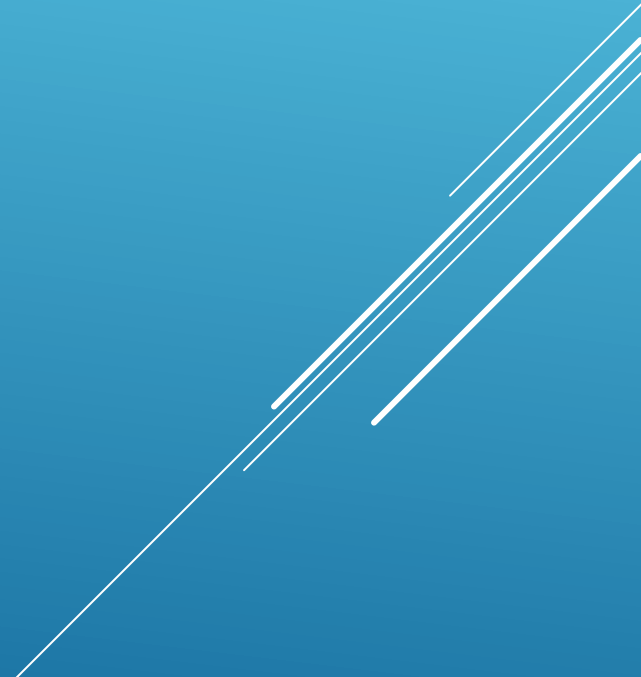
In present days scenario we are busy with our work that we do not have the time to clean the house properly. In order to tackle such a task, so that it could be completed in four weeks (the duration of the course), some simplifications and assumptions were made to the designers initial idea of an “ideal” autonomous/manual vacuum cleaner. In this way, some functional requirements that would improve the robot performance were not taking into account due either to their inherent complexity or to their mechanical implications..

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ABSTRACT

- ▶ Manual work is taken over the robot technology and
- ▶ many of the related robot appliances are being used extensively
- ▶ also. Here represents the technology that proposed the working
- ▶ of robot for Floor cleaning. Households of today are becoming
- ▶ smarter and more automated. Home automation delivers
- ▶ convenience and creates more time for people. Domestic robots
- ▶ are entering the homes and people's daily lives, but it is yet a
- ▶ relatively new and immature market. However, a growth is
- ▶ predicted and the adoption of domestic robots is evolving.
- ▶ Several robotic vacuum cleaners are available on the market but
- ▶ only few ones implement wet cleaning of floors. The purpose of
- ▶ this project is to design and implement a Vacuum Robot for
- ▶ Autonomous dry and wet...sS

COMPONENTS

- ▶ Gear motor with wheel
 - ▶ 12v AC to DC power supply
 - ▶ Arduino uno
 - ▶ Arduino motor shield
 - ▶ Servo motor
 - ▶ Ultra sonic sensor
 - ▶ 6v motor
 - ▶ Battery cell
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BLOCK DIAGRAM

