

# Car Sanitizing Robot

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ed Projects for Engineering Students

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**Abstract:- A car sanitizing robot is a type of robot that will be used to sanitize the areas of the car that are prone to human contacts. We are all aware of the current pandemic that is around us and we all are trying our level best to prevent ourselves from the virus by using all the precautionary measures such as sanitizers, masks, hand-washes.**

**But, have we thought about the vehicle sanitization? I think it's equally important as it can play a major role in this. So, we have thought to build this robot that will be available for this purpose.**

**This robot will be used to sanitize the prone areas of a vehicle such as door locks, mirrors etc.**

**It will be installed on the main entrance of educational institutes, hospitals etc where it will sanitize the vehicles before entering the area.**

## I. INTRODUCTION

We are all aware of the current pandemic that is surrounding us. Everyone is trying to be safe as much as they can. For that they are using masks, sanitizers, they are avoiding contact with people etc, but what about the vehicle sanitization, I know very few must have thought of it, but it's equally important as sanitization of the vehicle will prevent the infection.

A car sanitizing robot will be available for this purpose, it will be sanitizing the affected areas and in a such a way preventing us from the virus.

It will include:

- Roundabout circles
- Arduino
- Engine Driver
- Spray Gun
- Rp-Lidar
- Force flexibly
- It will hush up simple to control; anyone can utilize it and its even tranquil convenient.

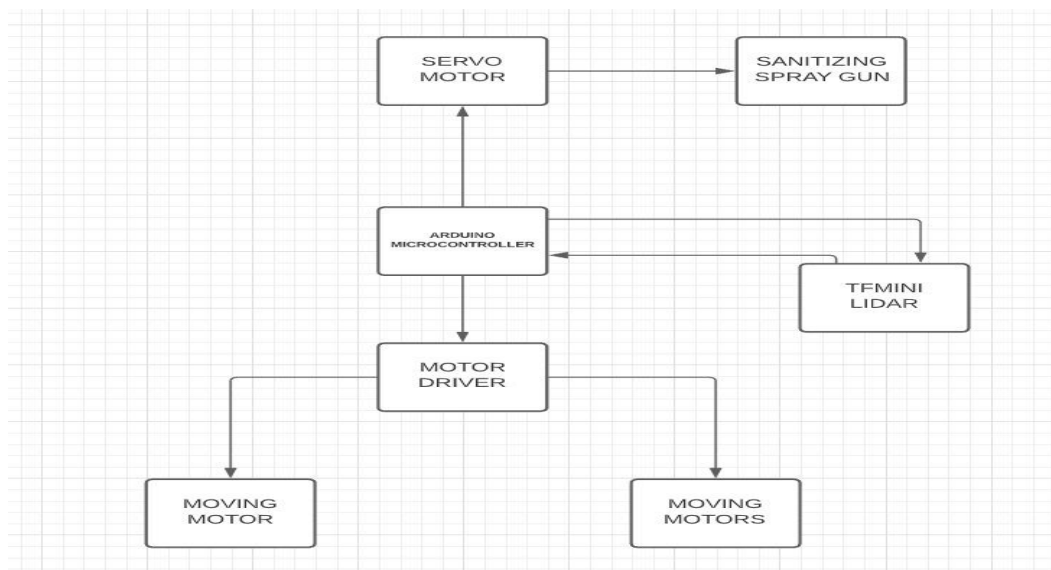
So our essential witticism here is to diminish the labor and let innovation assume its job. Our prime aim is to make this robot fully automatic, so that it will be easy to operate.

## II. LITERATURE REVIEW

• Karthick.T, Ravikumar.A, Selvakumar. L, Viknesh.T, has talked concerning the arrange to build up a self-ruling golem which will be move itself whereas not constant human direction.

- The autonomous cleaner golem framework that expends less force on contrastive and existing framework.
- The current framework expends high intensity of 500W for pull whereas "Programmed and manual vacuum cleanup robot" wants 10W for attractions • • • Naman Aggrawal, Piyusha Chaudhari, Anshul
- A model of the pivoting brush gizmo is formed physically to confirm the cleanup impact of the planned framework.
- From these examination we tend to tend to infer that the balk of this exploration is that golem can work naturally too physically from that presently u. s.
- going to actualize the golem which could be work whereas not human labor • • • Prathmesh Joshi, Akshay Malviya and Priya Soni[9]: This task report depends on the
- "Physically Driven Platform cleanup Machine" that provide the fundamental needs of cleanup ground floors.
- In 2002 Irobot propelled its floor cleanup robots named Roomba.It was a sensation at intervals the market.
- Floor cleanup golem with versatile application or freelance by Vatsal Iran|sovereign|crowned head|monarch} of Iran from Indus University Gujarat in 2015.
- Prabakaran V., Mohan R.E., Sivanantham V., Pathmakumar T., Kumar S.S.Tackling area Coverage problems throughout a Reconfigurable Floor cleanup golem supported Polyomino application Theory
- Prabakaran V., Elara M.R., Pathmakumar T., Nansai S.Floor cleanup golem with reconfigurable system • • Robotization in Construction, 91 (2018), pp.
- 155-165 • • • Nansai S., Elara M.R., Tun T.T., Veerajagadheswar P., Pathmakumar T.A Novel Nested Reconfigurable Approach for a Glass Façade cleanup golem • • Creations, a try
- Muscato A bottom effort light-weight weight ascent golem for the examination of vertical surfaces • • • Mechatronics (12) (2003), pp.
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**III. BLOCK DIAGRAM**

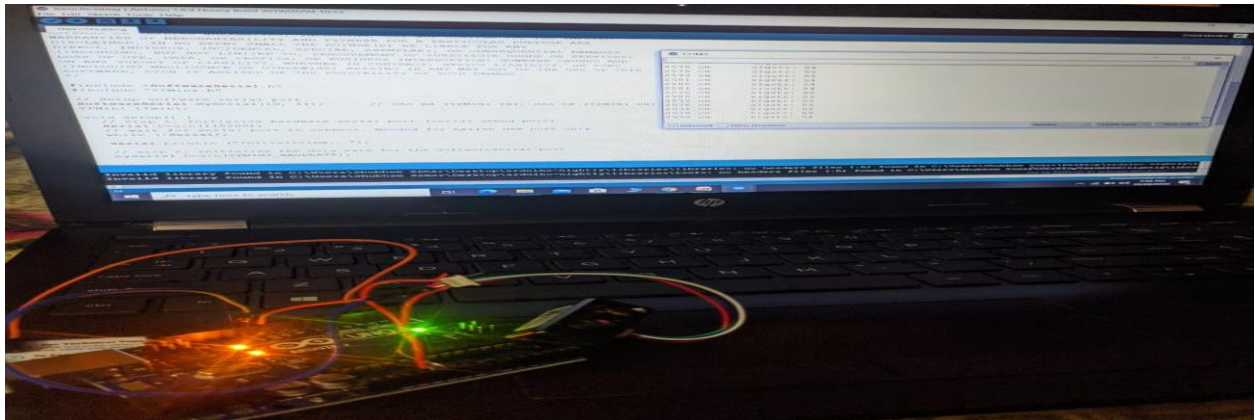


**IV. FINAL SETUP**

So, after uploading the codes we will turn on the robot and it will perform its function of sanitizing. It will run automatically. It is a car sanitizing robot so it will be installed at the main entrance of the educational institutes as well as hospitals. Any vehicle approaching will have to stop at the entrance so that the robot may first sanitize the vehicle then only the vehicle will be allowed to enter.

It will be a very efficient way to do the sanitizing and it will help us to save time as well as to prevent us from the severes of covid.

- Our primary motive is to create a robot that can be operated for sanitizing activities.
- Our main objective is to run the robot automatically.



**Lidar Testing**

**V. RESULTS AND DISCUSSIONS**

After uploading the code the robot will be working accordingly. Along these lines, subsequent to transferring the codes we will turn on the robot and it will play out its capacity of purifying. It will run consequently. It is a vehicle purifying robot so it will be introduced at the fundamental passageway of the instructive establishments just as emergency clinics. Any vehicle moving toward should stop at the passageway so the robot may initially clean the vehicle then just the vehicle will be permitted to enter. It will be an effective method to do the disinfecting and it will assist us with saving time just as to keep us from the severes of Corona virus .The field of versatile advanced mechanics

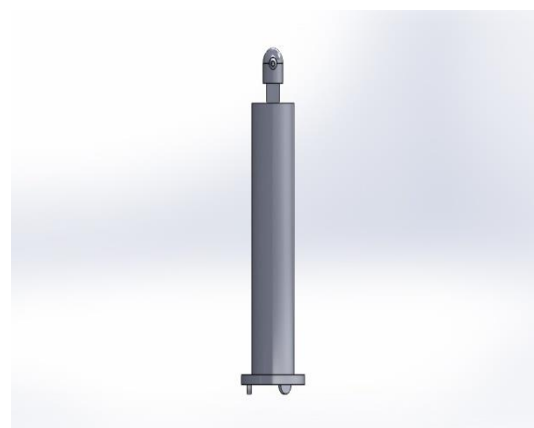
is a lot bigger than what has been portrayed in this report. It covers self-sufficient driving on streets and across nation, flying and water-based portable robots, and a scope of indoor applications that are not identified with assembling. Truly, research in the United States has zeroed in generally on regions important to the military and crisis administrations since that is the place where subsidizing for research has been accessible. All the more as of late, interest has been filling in versatile robots to help individuals or offer types of assistance in light of the fact that there is an insight that automated arrangements may be industrially suitable. Examination in Europe has been more fluctuated and has tended to a greater amount of the producing needs, while Japan has centered, up to this point, on humanoid

robots and Australia has directed generous work in mining and horticulture. These strands of exploration are beginning to be consolidated into frameworks with more noteworthy capacities both for development and self-ruling activity. Accordingly, it tends normal that the quantity of portable robots in assembling will increment and the errands that they will be required to achieve will turn out to be more perplexing. With an equal expansion in sensor handling abilities and equipment power, it will turn out to be more normal for individuals and robots to communicate in a typical workspace. A scope of assembling applications will be made conceivable that are presently troublesome or costly to accomplish. For instance, rather than requiring enormous, custom machine apparatuses to manufacture huge segments, it will be conceivable to move more modest, universally useful apparatuses around the segment and create it in a new way. This will require exceptionally exact position estimations, yet such apparatuses as of now exist and have begun to be applied in advanced mechanics applications. Another bit of leeway of not needing enormous "landmark" machine instruments is greater adaptability in orchestrating the mechanical production system and, at last, empowering dynamic reconfiguration as the item blend changes. Different preferences of utilizing versatile robots incorporate the capacity to offload perilous or ergonomically-testing assignments from individuals and to computerize dull undertakings for example, kitting and palletizing. Before these capacities can arrive at the commercial center, in any case, merchants should have the option to ensure the particulars and scope of use territories of their items, and buyers will need methods of looking at items and figuring out which are generally fit to their requirements. This will require execution measurements and methods that are as of now in their earliest stages. There will likewise be the need to program the assignments the robots will complete in a simple and adaptable way, to have the option to change errands quickly as the item blend changes, and to manage the substantially less obliged workplaces that unavoidably go with individuals working close by robots. Principles will likewise must be improved and fit, particularly when versatile robots fuse controllers and handy end-effectors. While progress is being made on all fronts, almost certainly, presentation of new abilities for assembling will be moderate. There is a requirement for more centered exploration around assembling advanced mechanics and particularly on versatile robots that can design their own ways, limit themselves definitely, and have adequate sensors and nonexclusive enough controllers to complete human-like undertakings in unstructured processing plants. Robotization expands administrator productivity. Need of talented work is disposed of. Execution of electrostatic spray painting diminishes the paint utilization by 9%. Hence, expanding the overall revenues. Electrostatic shower painting for huge scale creation builds profitability and consistency in quality, lessening revamp and limiting dismissal. Precise way arranging of shower design assists with advancing dispose of twofold covers and run-offs. The framework paints just when an article is distinguished. The

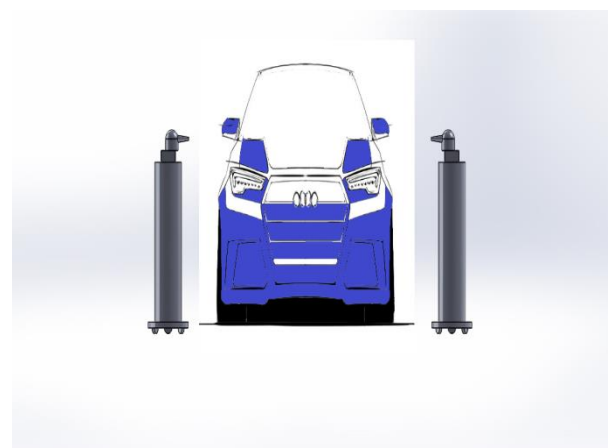
sensors identify the limits and geographies and relying upon it can paint different kinds of oxales. This framework can be incorporated with least changes to the current framework.



Side View

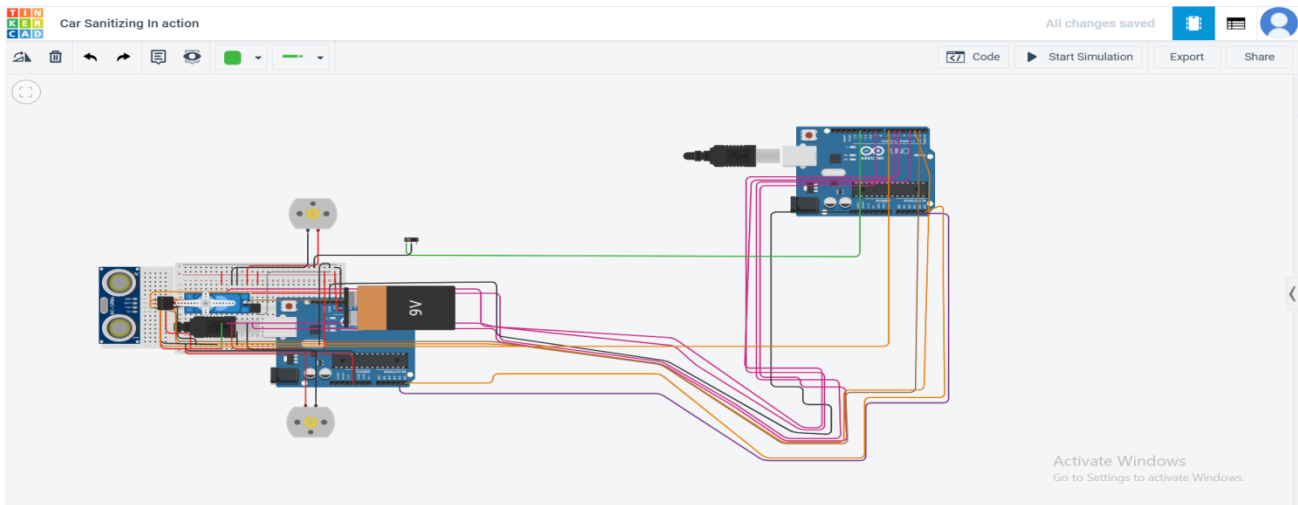


Front View



The robot in action

## VI. SIMULATION RESULT



Here we have an arduino uno connected with 2 dc motors and one servo motor and an ultrasonic sensor. As the vehicle approaches the spray gun attached to the servo starts functioning.

## VII. CONCLUSION AND FUTURE SCOPE

It will be used to sanitize the important parts of the car. The important parts includes the parts that are prone to human contact. It will be working for both sides of the car.

The showering system can be firmly seen by utilizing a camera which would be mounted close the automated arm giving the rancher live input of the showering. Coordinated GSM module which could control the start/stop and run activity of the robot. SMS based framework to begin and stop the administration Prearranged GUI based route framework. Android interface to explore the robot.

Programming dependent on yield type and sum.

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