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# AUTOMATIC HELMET WIPER

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**Abstract**

An improvised helmet design which is integrated with a circuitry for automatic rain sensing mini wiper located on the eye shield. The presence of a automatic helmet wiper will make two wheeler riding easier and safer in rainy season, since the driver won't be bothered by the continuous rain drops disturbing his/her vision. The wiper will automatically start as soon as it detects the presence of rain drops on the rain sensor mounted on the top of the helmet. This makes the rider to drive safety in the rain.

## 1. INTRODUCTION

Every bikers dream is a warm sunny day and an open road ahead with no worries on mind. But sometimes you just can't avoid from riding a motorcycle in the rain for example; if you are on the way to your work, on your Sunday trip or maybe if you are a pizza delivery guy, motorbike courier or motorbike paramedic. To make the automatic helmet wiper we need helmet, wiper, Arduino, rain sensor, jumper wires, battery. It is easy you assemble and easy to use.

## 2. RELATED WORK

Wiper is designed to keep your visor crystal clean in the rain. No need for visor coatings, no need for finger wiper which has one big design flaw; it makes you hold the handlebar with one hand while you wipe off your visor with the other. And this can be dangerous. On the other hand, Wiper run on batteries. A press of a button turns it ON. This is an elegant solution. Wiper is aerodynamic shape and very small; it is 50% smaller compared to action camera so it is hardly noticeable when attached. It takes only a second to attach it to your helmet visor. Every time we should press the button to wipe the helmet. It is dangerous to the rider. It may leads to accidentsFinger wiper is a small and simple product designed for wiping water from helmet visor while riding through rain. It is so designed that even the mud water also gets wiped off from the visor and the visor becomes clear giving the proper vision to the rider. its simple design it's easy to manufacture and at cheaper rate. Mount the finger wiper to the finger in such a way that it's wiping edge is parallel to ground. While using it, slightly bend your finger, wipe the water and ride even if it's raining.We should wipe the helmet with the finger so riding a bike with one hand in the rain is also dangerous .

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## 3. IMPLEMENTATION

Now we are propose for the problem statement, that is automatic helmet wiper. It works automatically when rain start falling. We attach the rain sensor to the helmet and we attach the wiper to windshield and to the rain sensor. we detect the rain by the rain sensor then wiper will clean the rain drop on the windshield. We will keep the Arduino to fix some time. In that particular time only the wiper will move.On behalf of community visit, we have visited a village near to our college. There we have identified many problems like accidents, no proper roads, security problems, no proper streetlights, problem faced by the people while fixing the lights etc., Out of all these problems we have decided and chose to make an automatic helmet wiper which helps people while driving in a rain,To make easier for motorcycle riders in the rainy season. When the rain was falling down towards to the earth particularly in that movement, The person who suffering while driving the two wheeler. So, we are come up with an idea that is automatic helmet wiper. It was safety while driving the two wheeler in the rainy season**.**

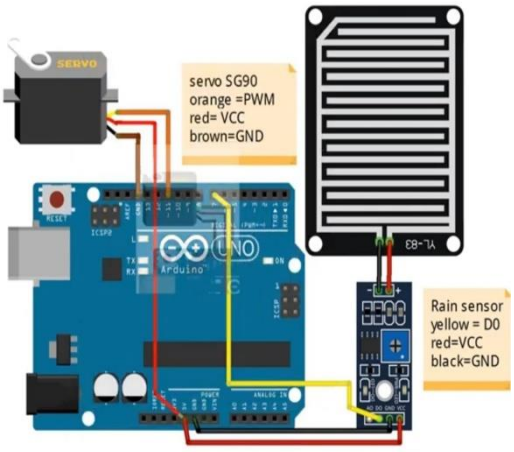
1. The automatic helmet wiper must be easily used by everyone.
2. The cost should be economical.
3. easily portable.

Connecting the servo motor. Now let us start with the first step to build the helmet wiper. First we will start with the mechanism to clean the wisor. As we used servo motor to clean the helmet wisor. In order to clean the wisor we attached a small wiper to the servo motor using a double tape plaster. For this mechanism the wiper must be placed above the helmet to clean the wisor. Also make sure that wiper cleans the wisor clearly.

Connecting the rain sensor Once servo motor is in the position we can move to the rain sensor. Above the servo motor and top of the helmet fix the rain sensor using double tape plaster.

The final step in the build process is to make the necessary connections using long connecting wires as per the circuit diagram and securing these wires so that they don't hang around.

All the wires from both the components i.e. Rain Sensor and Servo Motor are connected to respective pins of Arduino. This finishes up the build process of the Automtic helmet wiper.




Block Diagram

## 4. EXPERIMENTAL RESULTS

Our problem is to design a helmet wiper which can be work automatically while raining and also can be used by everyone. We designed our helmet wiper in such a way that is can be be easy to mount on the helmet, Our design includes very simple mechanism. The design of the prototype is as shown below in the figure.

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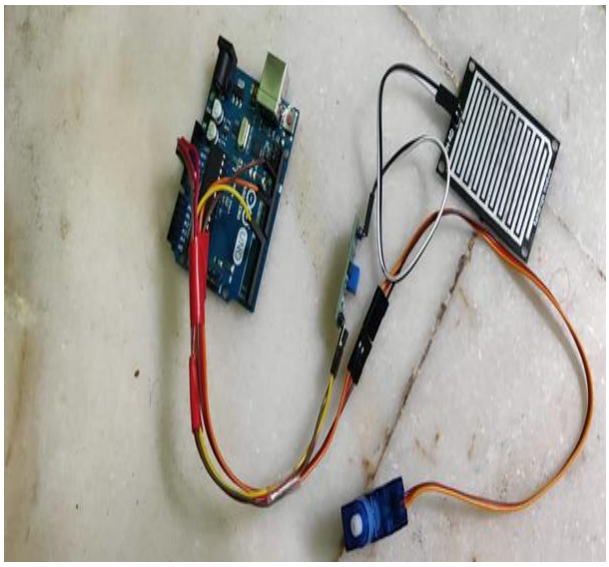

Conceptual Design

Making an automatic helmet wiper, where wiper cleans the helmet wisor when rain falls on the helmet. The other important components to make this automatic helmet wiper is servo motor and rain sensor.

Automatic helmet wiper

## 5. CONCLUSION

Every bikers dream is a warm sunny day and an open road ahead with no worries on mind. But sometimes you just can't avoid from riding a motorcycle in the rain for example; if you are on the way to your work, on your Sunday trip or maybe if you are a pizza delivery guy, motorbike courier or motorbike paramedic…In heavy rain, rider can't see the traffic clearly. At night the situation even worse. Riding a motorcycle in the rain can be really dangerous. For this problem we have helmet wipers in the market but we are going to make an automatic helmet wiper which automatically wipes the water drops on the helmet. This helps the people to drive safely in the rain. To make the automatic helmet wiper we need helmet, wiper, Arduino, rain sensor, jumper wires, battery. It is easy you assemble and easy to use.

## 6. REFERENCE

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**https://images.app.goo.gl/c78q2P6xTZqgK1PN9https://images.app.goo.gl/oqvHkkPMU6gZ5c6W9https://youtu.be/kEd3I2nfKvg**

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