COS Arduino Project Write up

The main idea was using LDRs to calculate the speed of objects in motion. The method we intended to use was that we set up two LDRs at a fixed distance from each other, and register the times at which there was a drop in the voltage of surrounding light in order to calculate the time taken by the object to cross the two LDRs.

The first issue we faced during the setup was that we began with an ambitious distance of 72 cm, but soon realized that the voltage being registered was delayed due to the use of long wires and multiple pieces of the bread board. We then changed the distance to 15 cm. Moreover, while checking the time we realized that the LDRs were of different make, so we had to initialise individual starting calibrations. While we had initially planned for the object’s speed to be measured in ambient light, we realized that background lighting was causing issues with readings, so we had to switch off all lights and use a torch pointed at the LDRs as a light source.

For the benchmarking of the actual speed of the object, we didn't have a proper device to find the speed, so we used a phone stopwatch that ran at the same time as the Arduino.

At the end of the experiment we realized that the setup was not viable for actual use, but it provided us with an interesting learning experience.

Team members: Divij, Jyotica, Srishti