

Project Name – “Faulty 1.0” – A line follower

Problem Statement- To make a robot capable of autonomously follow a set-coloured path.

Project Budget- INR 2000

Description-

A robot to be autonomous means for it to solve a problem statement successfully without any human intervention. It was the test at many robotics competitions. With this began the research. It was a simple design, to use the signal data from an IR sensor to give the Arduino data and for it to perform preprogrammed instruction in an if else manner. It was simple but difficult to execute.

I firstly needed a robot with said sensors to make the program work. I used acrylic sheets and a few nuts and bolts with washers to make a pseudo type frame on which I basically glue gunned all the components and connected everything. It was 3 IR sensors, an Arduino uno R3, a 12 V Lead acid battery pack. Some Toy Motors with wheels and an L293D Motor Driver Circuit.

After assembly I downloaded a premade program and started editing according to the connections I made. After which I made a mock track to run it on, I ran several tests and kept adding statements, delays, breaks etc wherever needed and came up with 8 sensor conditions for the program to follow.

Upon final tests it worked flawlessly but didn't look appealing at all. My seniors complained the design was faulty, so I named it the same. I took it upon myself to make it look more appealing, compact, and ingenious.

With that began the project of faulty 2

Materials Consumed-

1. An acrylic sheet
2. Glue gun and sticks
3. Nut/ Bolts / Washers
4. IR Sensors
5. Ribbon Connectors
6. Arduino Uno
7. L293D Motor Driver Board
8. Custom Made Power Board
9. 7.2 Volts Lead Acid Battery Pack.