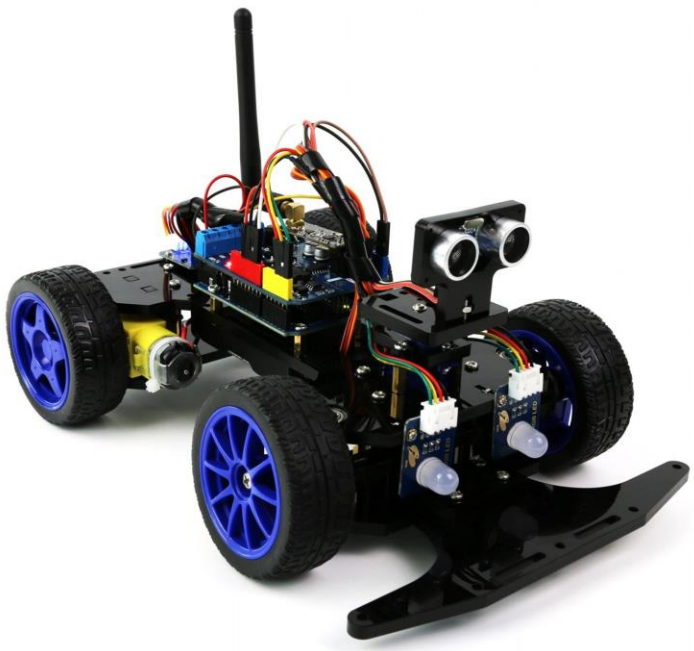
PROJECT PROPOSAL

LINE FOLLOWING ROBOT

TEAM A2 - SONILASH



GP118 – BASIC ELECTRICAL AND ELECTRONICS ENGINEERING

[Pick the date]

Project Overview

For Deeep-speed 2019, We've Been Tasked With the Creation of a Robot That Is Able to Follow a Preset Path (i.e. A Line Following Robot). The Challenge Here is to Program the Robot Such That It Completes the Track in the Shortest Possible Time and with the Highest Possible Accuracy. With This year's Batch Given The Option To Program The Robot Using Arduino Or Some Other Digital System, We've Decided To Go With An Arduino Approach.

Problem Analysis

This Project Has Its Own Set Of Internal Challenges That Require Overcoming:

- Speed Control of the Robot.
- Differentiating The Colours Of The Path Upon Which The Robot Is Placed.
- Identification of Curvature in the Said Path.
- Turning Mechanism of the Robot (At the Curves And Intersections).
- Circuit Design(To Optimize Weight Distribution And Power Consumption, Hence, Improving Performance)
- Usage of the Arduino Board.
- Cost Optimization.

Project Cost

Component	Unit Price(LKR)	No of Units	Price
3 Wheel chassis	1100.00	1	1100.00
IR sensor	170.00	3	510.00
Aduino-Uno board	1400.00	1	1400.00
Jumper Wires(M – F)	6.00	10	60.00
Female DC pin	47.00	1	47.00
4007 diode	2.50	1	2.50
1K resistor	0.50	4	2.00
LED	3.00	10	30.00
L298 Motor Driver	525.00	1	525.00
Switch	25.00	1	25.00
Battery Rechargeble	1200	1	1200.00
TOTAL			**4899.50**

*cost are approximate values only. So it can be changed.

Team Details

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