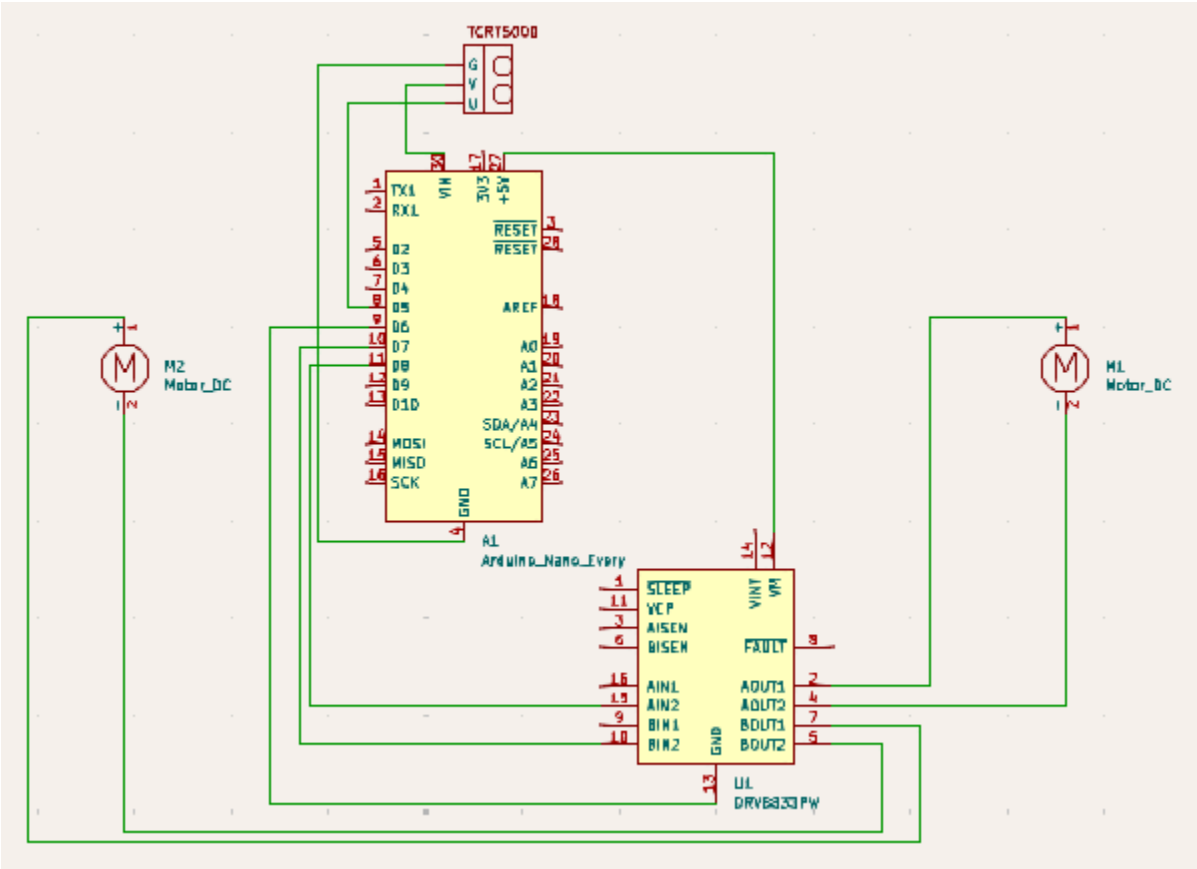
MATERIALS LIST

Motor controller(DRV8833)
2 DC TT Gearbox Yellow Motors
Arduino Nano
Wires
USB Type A/C to USB Mini B Cable(Arduino Cable)
Pipe cleaners
Adhesive(Tape, Glue, etc.)
IR Obstacle Avoidance Sensor(TCRT5000)

WIRING DIAGRAM



STEPS

Wire everything according to the diagram above. Then go to this link***[Put GitHub link here]*** and download either the Arduino code or the C code, whichever one you prefer. If you want a simple way to control the motors, just go to the string variable "code" and replace it according to this pattern:
[[0-2][(a?b?)|(b?a?)]][[0-2][(a?b?)|(b?a?)]][[0-2][(a?b?)|(b?a?)]]...
.

[0-2] can either be 0, 1, or 2. If 2, then it will control the motors regardless of the state of the IR sensor. If 1, it will control the motors only if the IR sensor reads HIGH; otherwise, it will stop the motors. Likewise, if 0, it will control the motors only if the sensor reads LOW.

[(a?b?)|(b?a?)] simply means that between digits and after the last digit, there can only be the strings "a", "b", "ab", or "ba". If there is an "a", then one of the motors will turn on; if not, it will turn off. If there is a "b", the other motors will turn on.

Once you have modified the variable "code", change the variable "L" to the length of "code". Then upload to the Nano. Keep the Nano cable plugged in; it will serve as a power source.