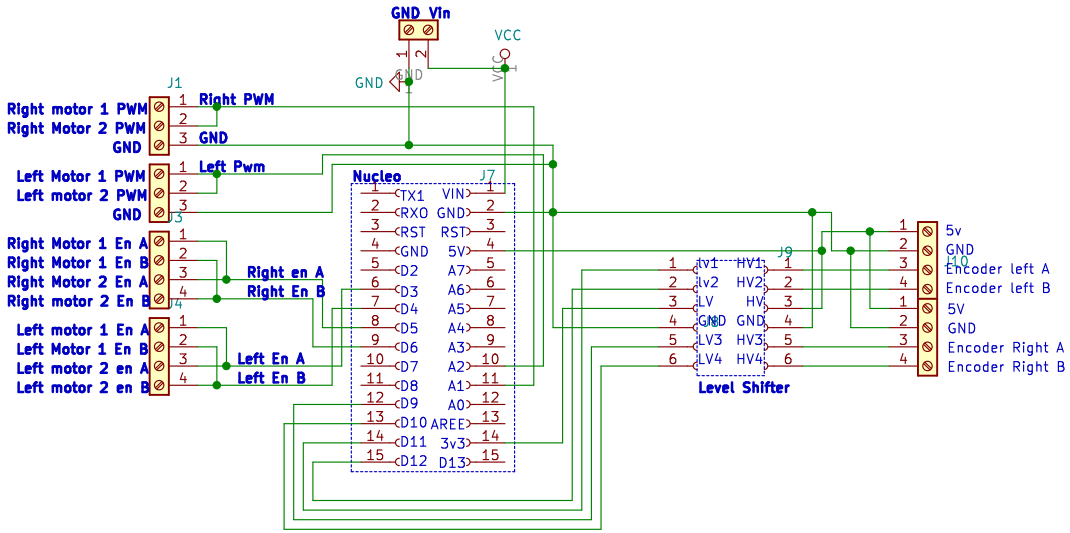
The speed of the motor controller is controlled using PWM and the direction of the motor is controlled using the enable pins A and B.

The Nucleo outputs 3 volts and the input is 3 volts, but the encoder uses 5 volt logic. A level shifter is used to convert 5 volts down to 3 volts.

Each side of the robot has two motors connected together to provide more torque. The motors share a PWM signal and enable pins on their respective sides.



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