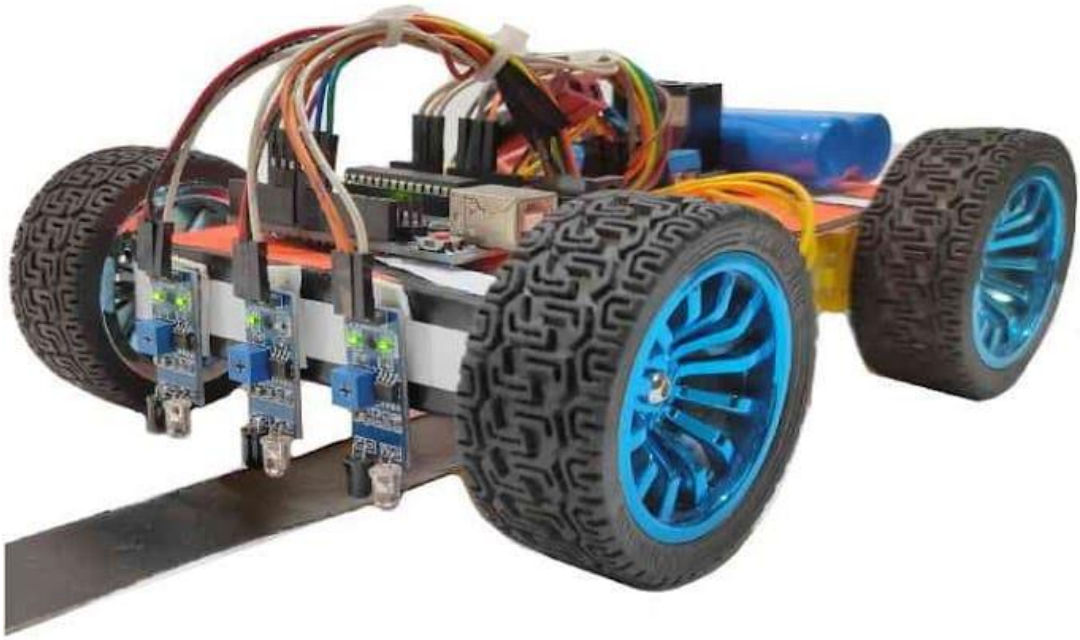
MAZE SOLVER BOT



ALGORITHM

LEFT HAND TURN

The basic idea of this algorithm is that the bot should turn and explore the track by only turning left at a junction.

Left Prioritize Algorithm

This algorithm is used to move the bot in the required direction.

- ✓ **Case-1: Only middle sensor detects line**

  Bot moves forward

- ✓ **Case-2: Only Left sensor detects line**

  Bot turns left

- ✓ **Case-3: Only right sensor detects line**

  Bot turns right

- ✓ **Case-4: If left sensor detects line along with middle sensor**

  The bot shall turn left.

- ✓ **Case-5: If left sensor and right sensor detects line**

  The bot shall turn left.

- ✓ **Case-6: If all the sensors detect line** (caution this is a tricky case)

  - **Situation 1: The detect line is a T-junction**

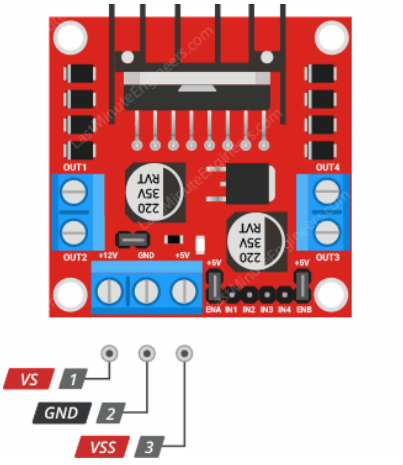
    In this case the bot should make a left turn.

- ✓ **Case-7: If no sensor detects the line**

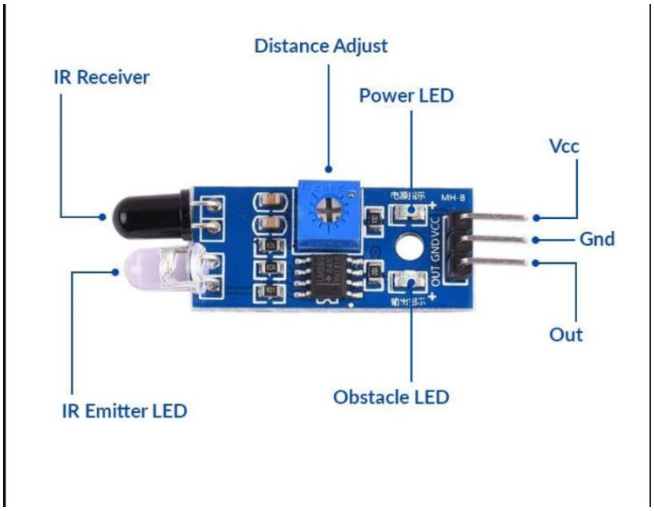
  The bot shall make a left turn until any sensor detects a line and the move according to above cases.

- ✓ **Case-8: If right sensor detects line along with middle sensor**
  - **Situation 1: T-junction**
    - The bot shall move forward (T-junction)
  - **Situation 2: right turn**
    - the bot again moves forward, making it similar to when no sensor detects a line**.**

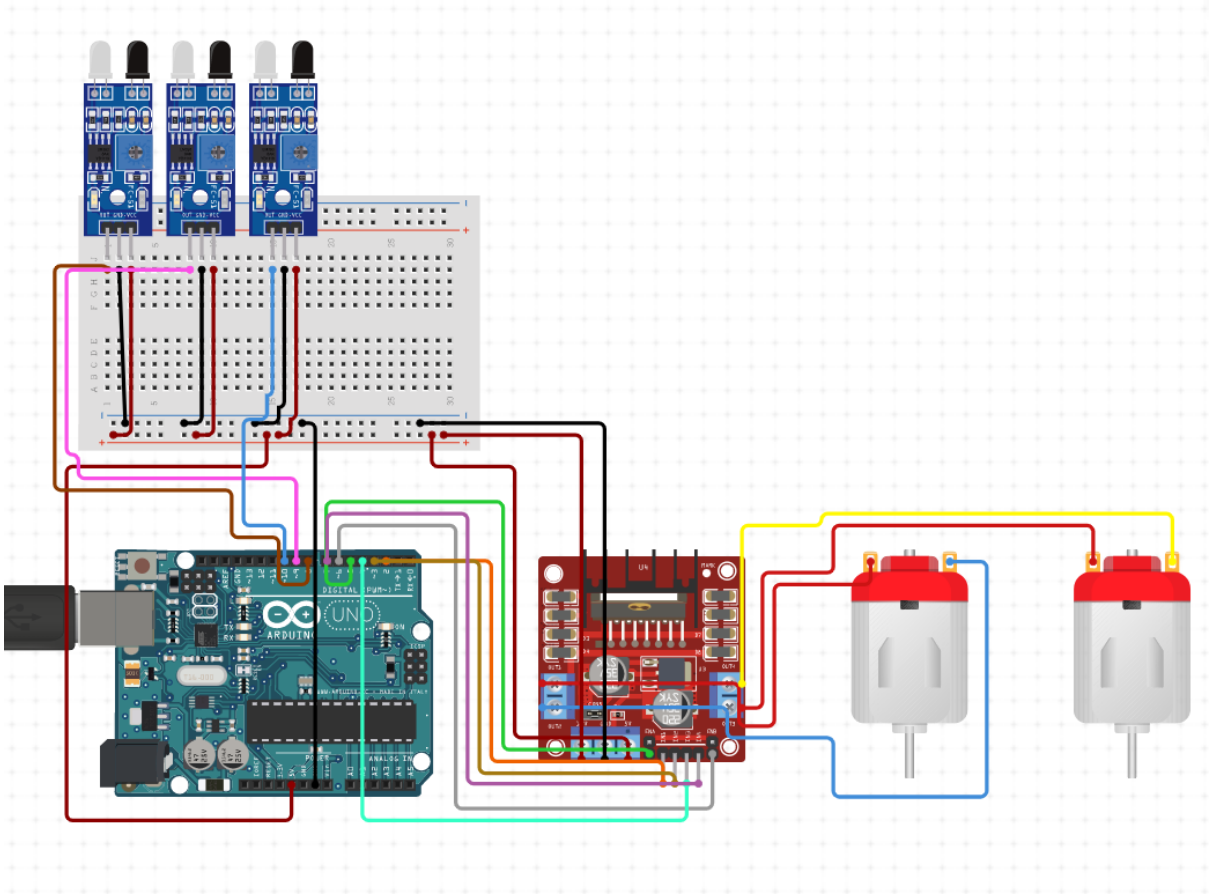
CONNECTIONS & COMPONENTS



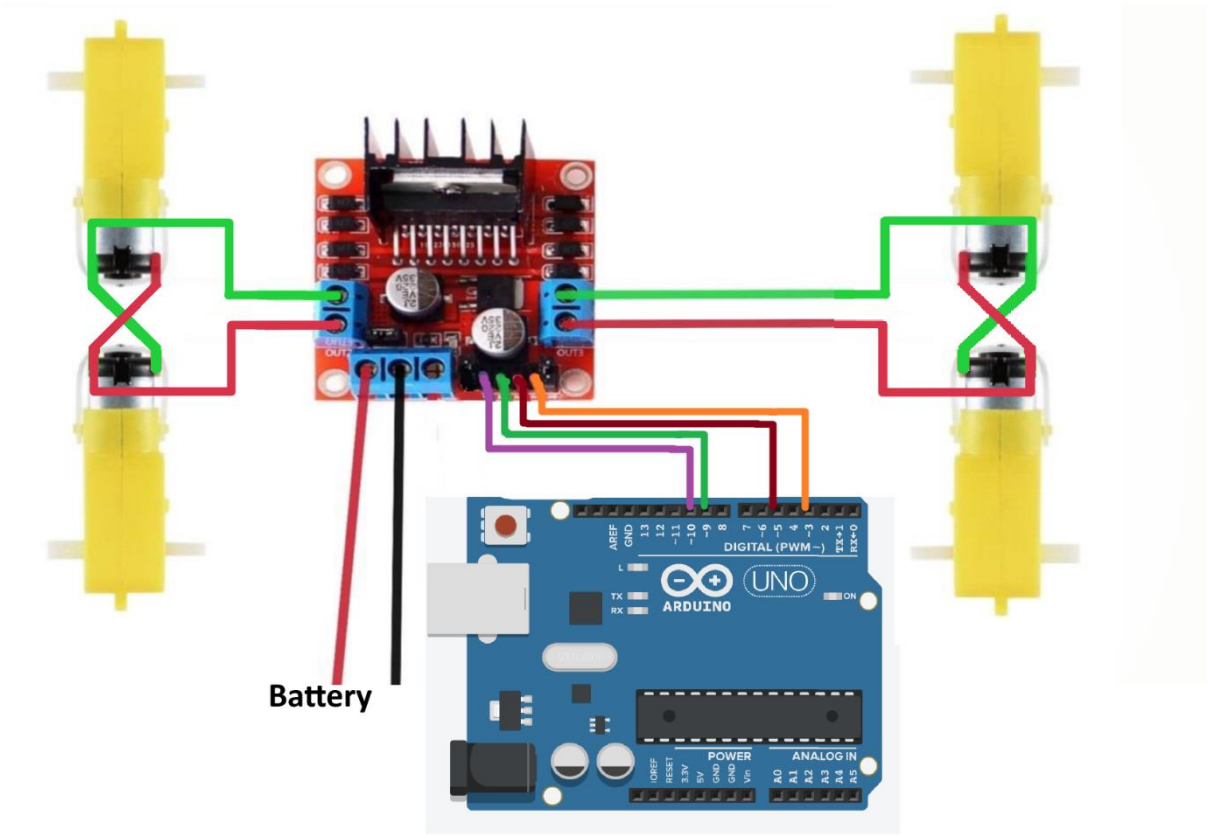
H Bridge



Infrared Sensor Module



Connections



Connections between Arduino Uno, Motor Drivers and H bridge