Delivery Bot

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Team 1

PROBLEM STATEMENT

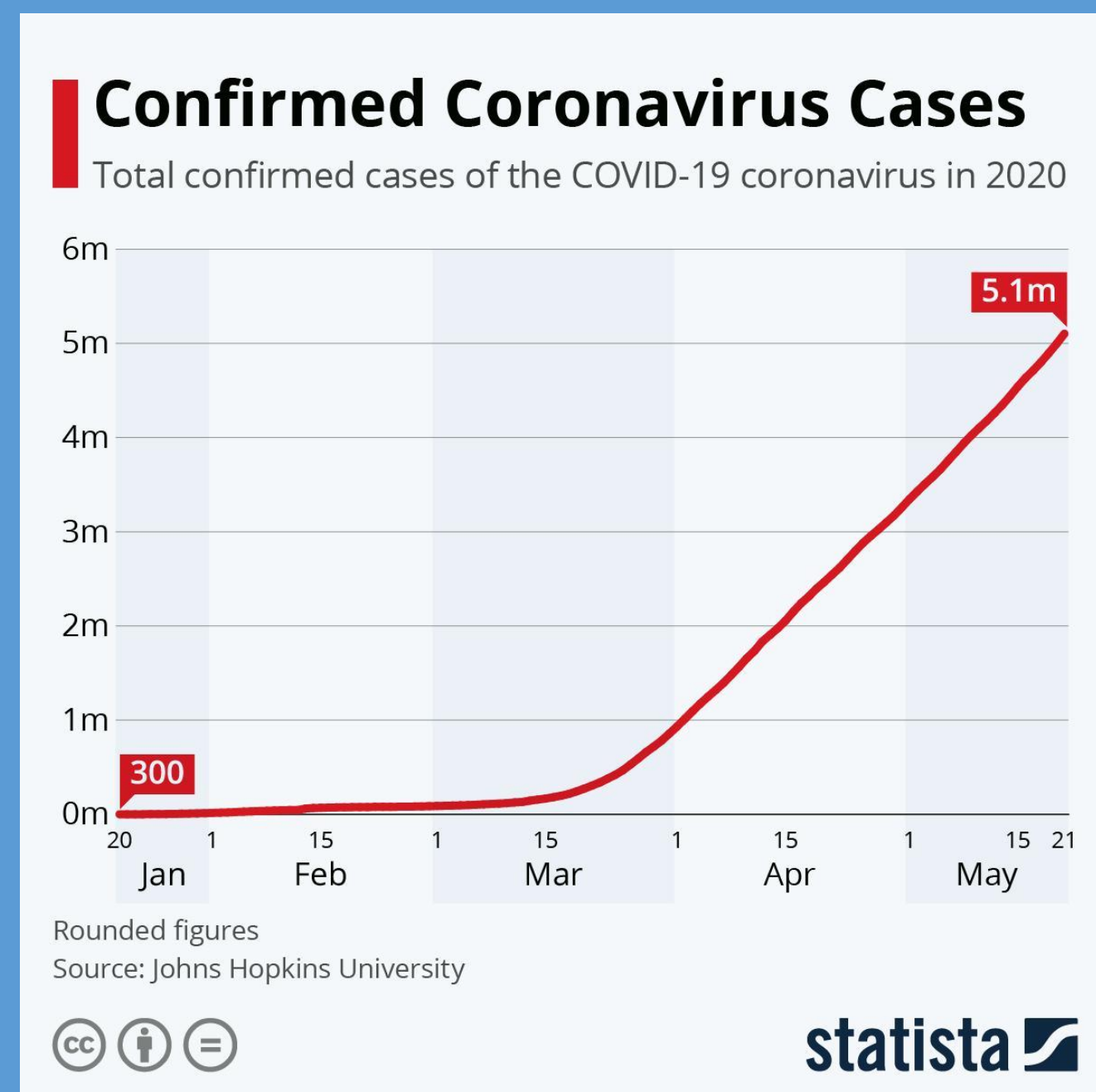Due to the increase in the COVID – 19 cases and is affecting 20 billion people worldwide.

Fig 1: COVID cases

Fig 2: Benefits of Autonomous Robots

BACKGROUND

There is a need of innovative techniques to help nursing home staff to decrease the contact of nurses and residents to help contains the virus better. In order to address this issue our robot will deliver medical supplies, food etc. to affected patients autonomously. Therefore helping the pandemic in a positive manner.
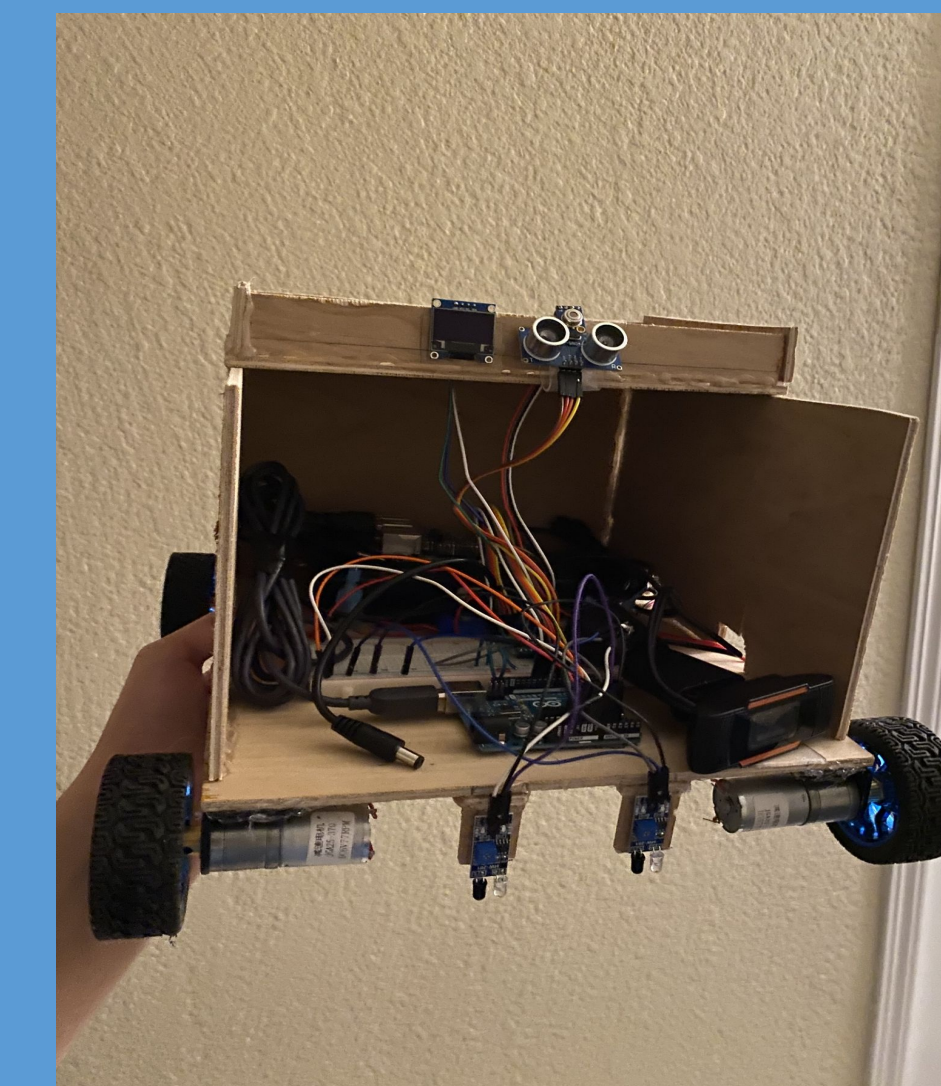
SUMMARY OF WORK

Fig 3: Prototype

This system uses IR sensors to follow a black tape which will help guide the robot to enter the desired room. It also uses USB camera to read QR code to make decisions when it comes to an intersection. It has a temperature sensor which will record the temperature of the resident and send the results to the nurse. It also has a tray which will carry the supplies. It uses two microcontroller which are connected through serial port to integrate them together. The line following algorithm is stored on the Arduino UNO and the decision-making algorithm is stored on the Raspberry Pi 4.

IMPACTS ON COMMUNITY

- Helps Decrease the contact between COVID Patients.
- Help contain the virus effectively.
- Opens doors to new technology being integrated into Medical environments.