ROBOWHEEL

Project name: Robowheel

Project number: 231201

Workshop: Autonomous car

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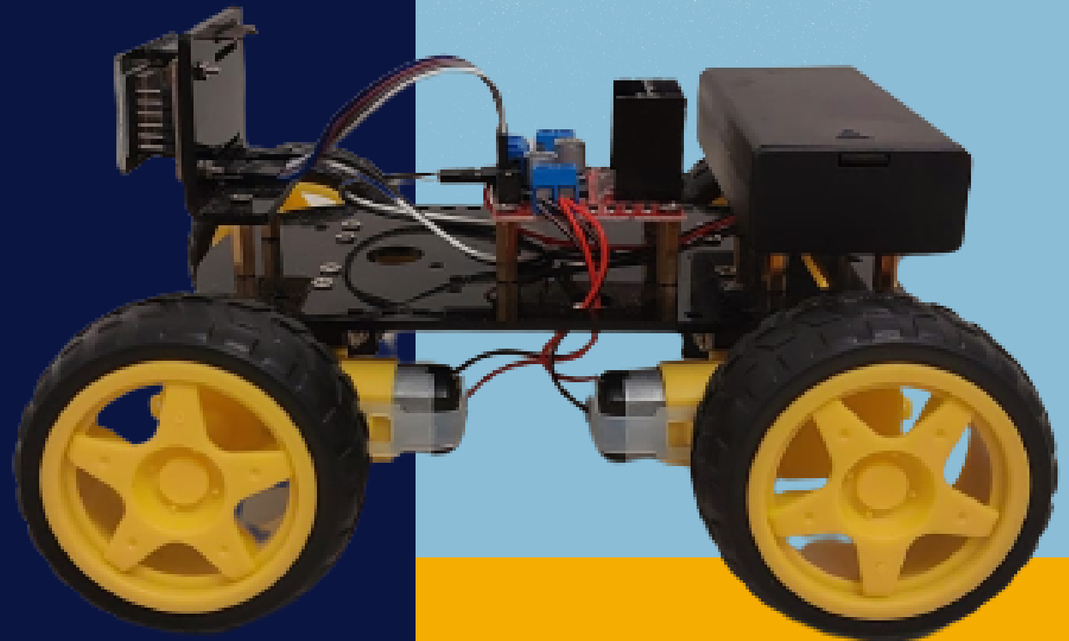


ROBOWHEEL

PROBLEMS

Lack of independence -

Driving a car may be restricted to people with certain health conditions.

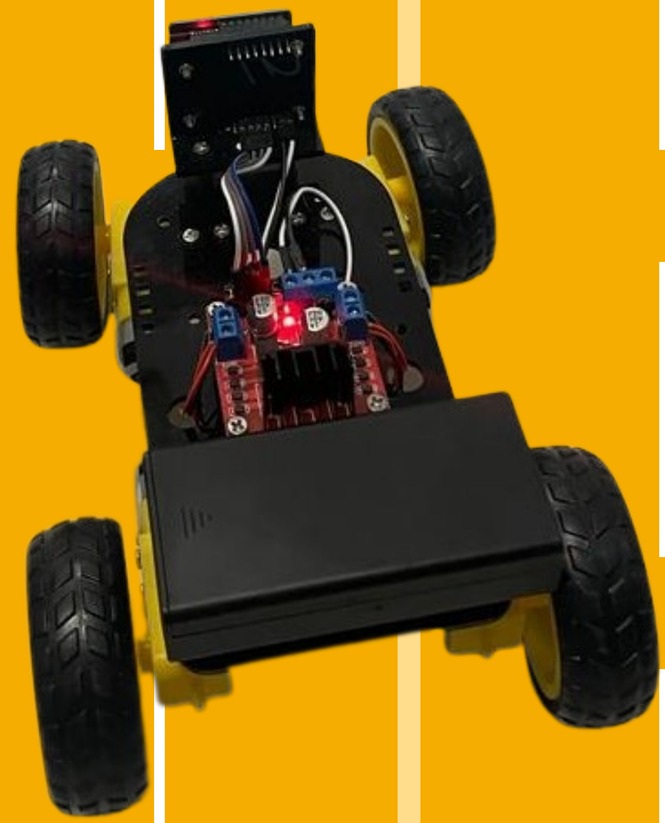
Accidents -

Many car accidents occur due to human distractions, such as the use of mobile phones.

Waste of time -

Congestion in the traffic makes it difficult for people to complete all tasks on time due to heavy traffic congestion.

Who is our target audience?
Everybody!



OUR SOLUTION

Our autonomous car intelligently detects road signs, traffic lights, and pedestrians, seamlessly adjusting its speed accordingly, ensuring safety and efficiency.

Gain independence -

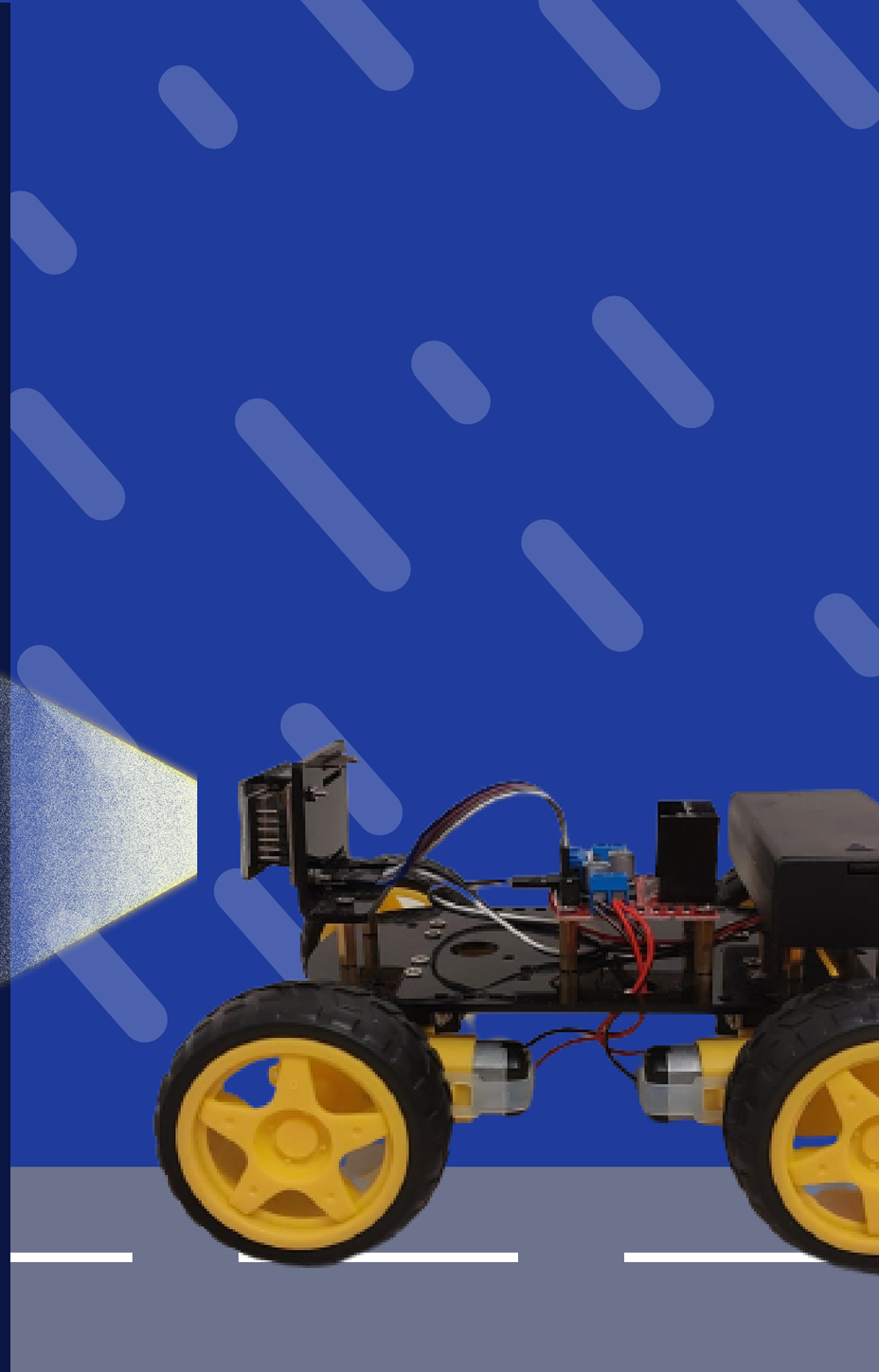
An autonomous car can drive independently without requiring human assistance.

Safer driving -

Autonomous cars can constantly monitor their surroundings and react faster than humans

Time savings -

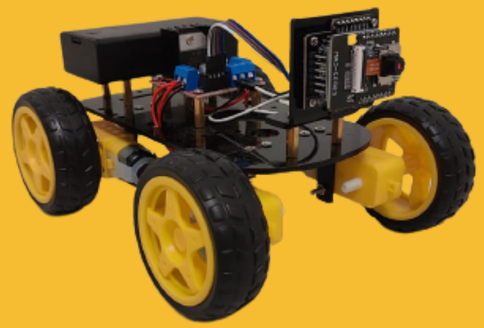
Passengers can work, study, relax while driving autonomously.



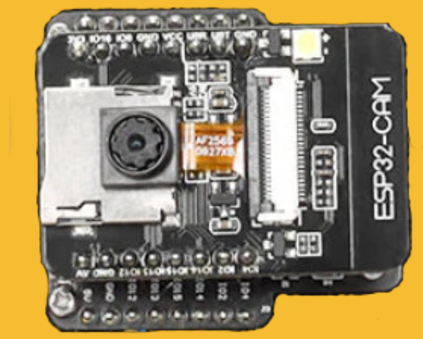
DEMONSTRATION OF THE PRODUCT AND THE SOLUTION - 1

DEMONSTRATION OF THE PRODUCT AND THE SOLUTION - 2

How does it work?



The car communicates with the server and starts driving



The car takes photos and sends them to the server by wifi connection

The server uses deep learning and image processing techniques to detect road signs

The server sends instructions such as stopping, slowing down, accelerating

The technology we use:

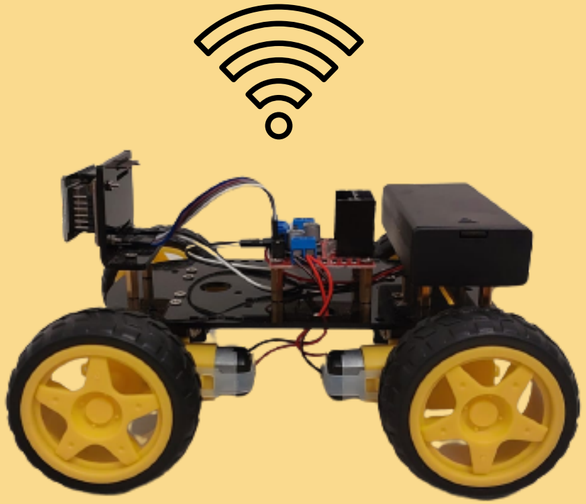
SERVER SIDE

PyTorch

OpenCV

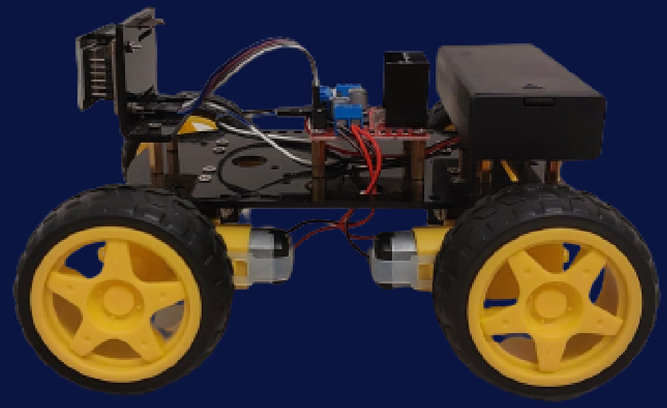
CLIENT SIDE

ARDUINO



COMPARING EXISTING SOLUTIONS

1. **PUBLIC TRANSPORTATION SYSTEMS SUCH AS BUSES AND TRAINS.**
2. **INCREASED FINES TO ENCOURAGE DRIVERS TO CONCENTRATE ON DRIVING**
3. **A MEDIUM SPEEDOMETER DISPLAYS YOUR CURRENT SPEED**



Autonomous cars enable people to control their daily lives. In addition, road accidents are significantly reduced due to lower human error cases.

The bottom line

Our project demonstrates the capabilities of AI-powered autonomous cars to effectively detect road signs, traffic lights, and pedestrian crossings to ensure safe driving.

Through accurate perception and interpretation of the environment, these cars can adjust their speed accordingly, significantly reducing accident potential.

This transformative technology holds great promise in empowering individuals with disabilities, providing them with enhanced control and independence in their everyday lives.