

RASHTRIYA BAL

VAIGYANIK

PRADRSHANI

(2023-24) PROJECT

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THEMES AND TITLES

-> **Focal theme -:**

Science and technology for society

-> **Sub theme -:**

Communication and transport

-> **Project -:**

Sound operating car

ABOUT PROJECT

Objective-: The goal is to build a car that responds to sound signals, showcasing the application of sensors in real-world scenarios.

Components-

Chassis-: Use a small, lightweight car chassis as the foundation.

Motors and Wheels-: Attach motors with wheels to enable movement.

Sound Sensor-: Integrate a sound sensor to detect audio signals.

Microcontroller-: Utilize a microcontroller (e.g., Arduino or Raspberry Pi) to process sensor inputs and control the car.

Power Source-: Connect a suitable power source to run the motors and electronics.

Circuit Setup-

Connect the sound sensor to the microcontroller.

Wire the microcontroller to control the motors based on sound input.

Programming:-

Write a program for the microcontroller to interpret sound data from the sensor.

Define thresholds for sound sensitivity to trigger specific actions (e.g., moving forward, turning, stopping).

Educational Aspects:-

Highlight the science behind sound sensors and microcontrollers.

Emphasize the interdisciplinary nature of the project, involving electronics, programming, and physics.

PROBLEM WE FIND

We have finded a problem that as in our country alot of highways are building and so many people prefer to move one place to another buy using car but sometimes due to long distance and sitting in one position for long time may cause several injuries.

As we hear so many car accident due to sudden coming of some animal like Dog, Cow etc. In which when these animal suddenly comes in front of car and driver of car cannot able to control the car.

Hence car got crashed so by seeing all these we have make a car in which we can use voice command to move or stop the car which make driving experience good and make driving easy.

If an animal comes in front of car driver can use voice command immediately to stop the car. We can also operate it by using claps also

FUTURE PLANS

1. INNOVATION AND EXPERIMENT :-

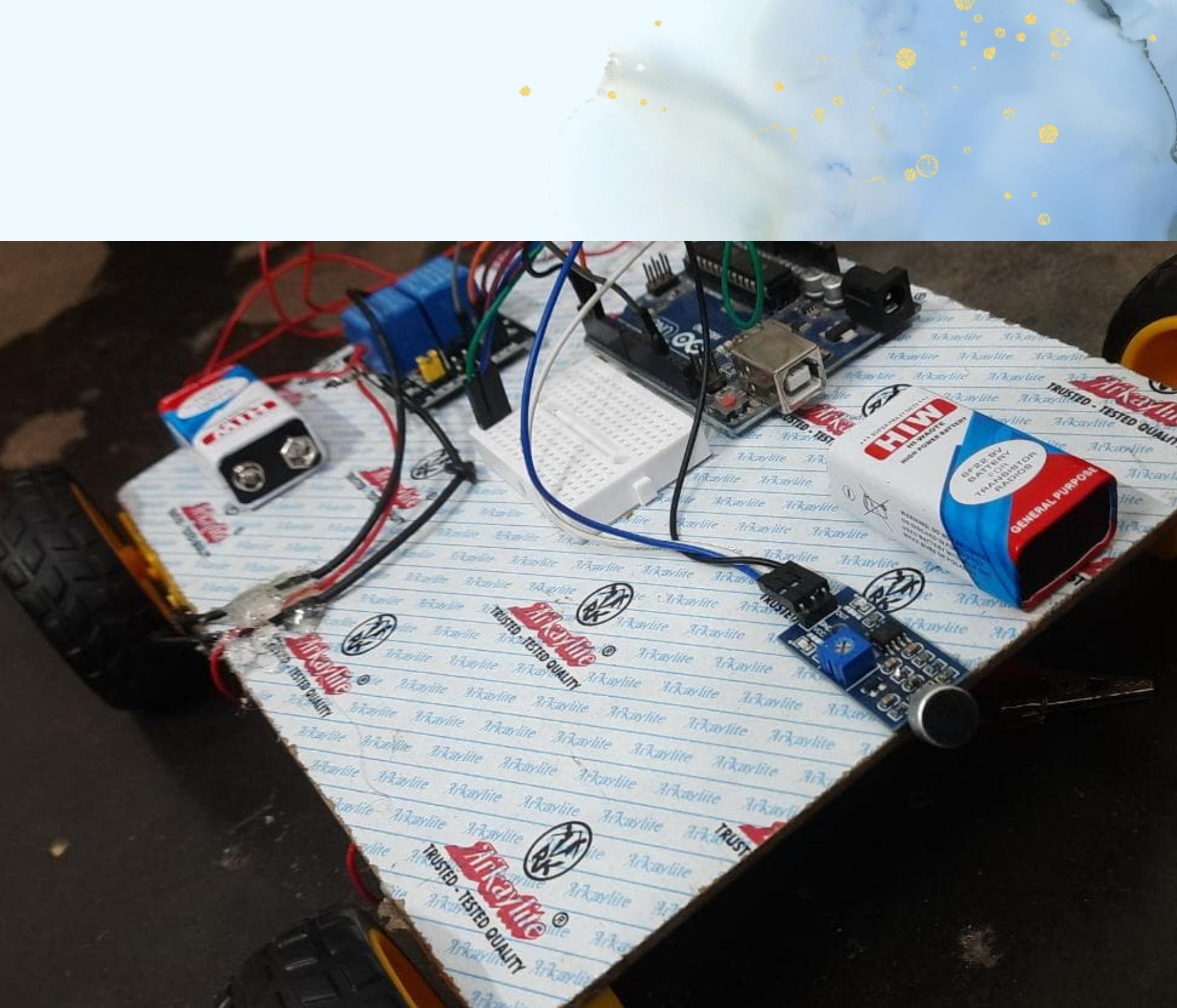
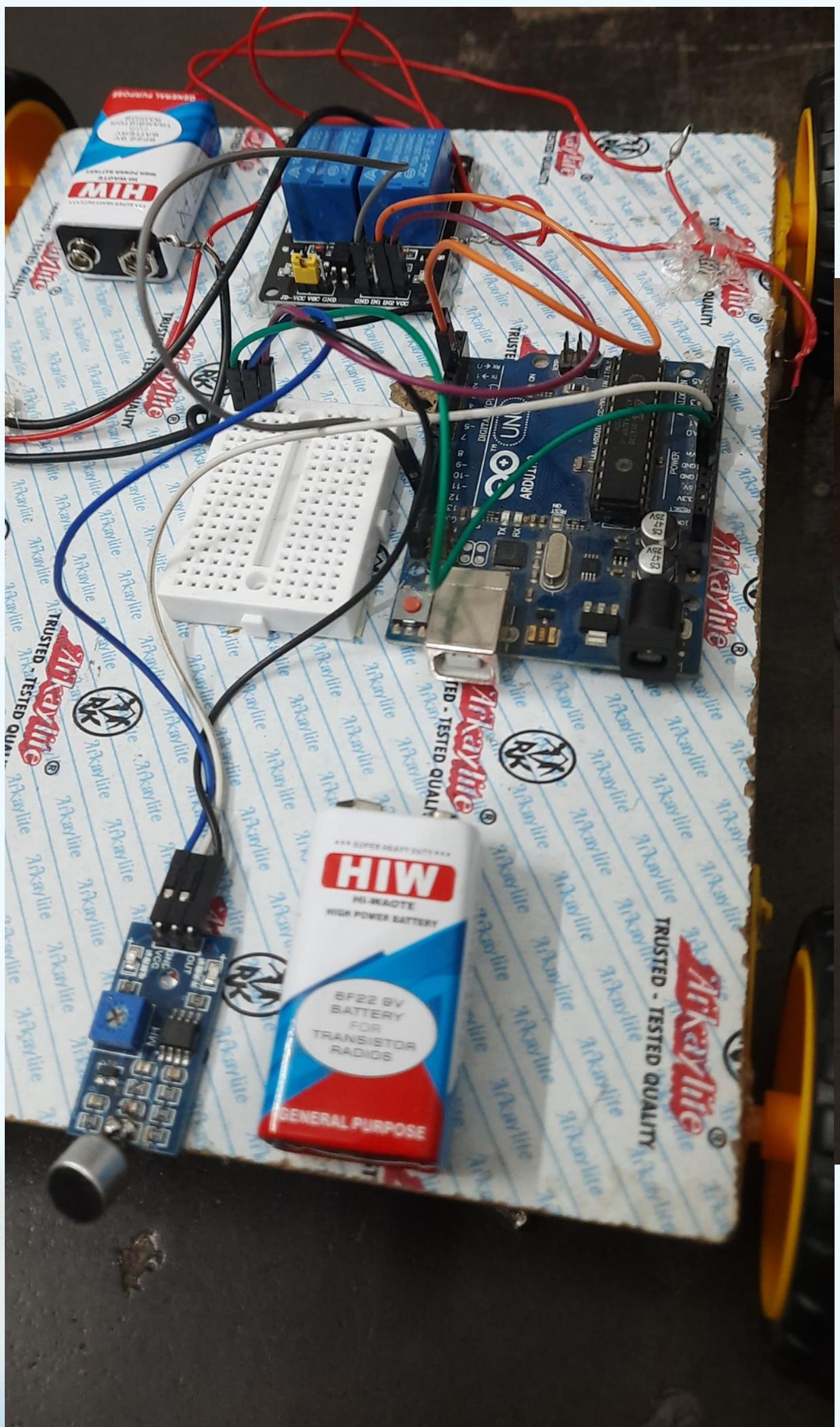
As we know that technology is growing day by day so if in future someone take the idea of this project to the higher level and simplify the idea and in fuse it with technology it become a great experiment as well as so much useful.

2. EDUCATIONAL PURPOSE :-

As we know that students learn things more fastly in visual or picture form and that got save in their long term memory and this project may help students to learn some basic things about electronic, programing and sensor as I have used a good interaction of electronic, programing and sensor

3. ENTERTAINMENT PURPOSE:-

It is good for entertainment purpose also for an infant because an infant can't able to talk and not understand things but make noise and claps also so, when an infant do this do this then car move or stop. It also does not harm and due to actions perform by car infant attract towards it.



ABSTRACT

The "**Sound Operating Car Project**" is an innovative and interactive model that enhances the driving experience by integrating sound-based controls for various vehicle functions. This project focuses on utilizing sound signals to operate specific features within the car, providing an alternative and accessible interface for drivers. The working model employs sound recognition technology to interpret predefined audio commands, enabling users to control essential functions such as turning on lights, adjusting air conditioning settings, activating windshield wipers, and more. The objective is to create a user-friendly environment that caters to individuals with diverse needs, including those with mobility challenges or disabilities.

Write Your Topic Or Idea

The system is built upon advanced audio processing algorithms and sensors strategically placed within the car interior. These sensors capture and interpret sound signals, allowing the car's onboard computer to execute corresponding commands. The project also incorporates machine learning techniques for improving the accuracy and adaptability of the sound recognition system over time.

CONCLUSION

The development and implementation of the sound -operated car project have resulted in a unique exploration of alternative control interfaces within the automotive domain. Throughout the course of this project, we have achieved several significant milestones and gained valuable insights into the feasibility and potential applications of sound-based vehicle control



A background featuring a large, abstract blue and white wash with irregular edges. Scattered throughout are numerous small, gold-colored circles of varying sizes, some with intricate, organic patterns resembling leaves or petals. Two prominent, semi-transparent gold geometric shapes are positioned on the left and right sides. The left shape is a complex, multi-sided polygon with many internal lines, while the right shape is a more open, triangular or star-like structure.

THANK YOU