THE ROBOTIC PICKING MACHINE PROJECT

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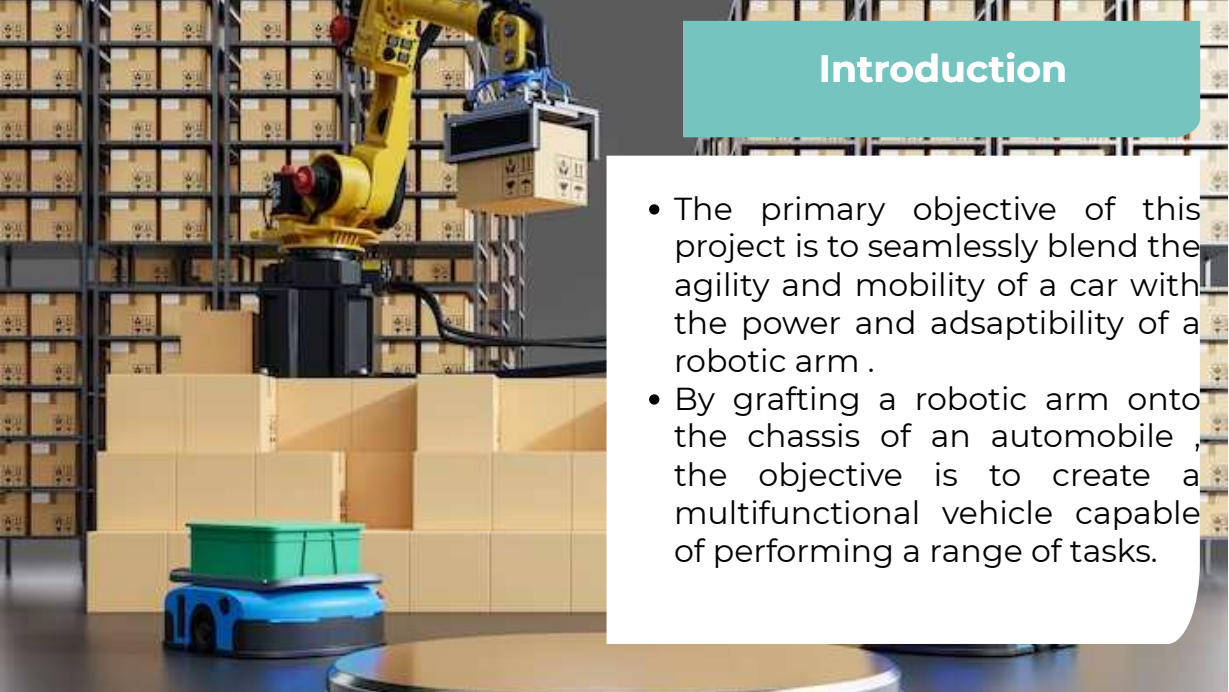
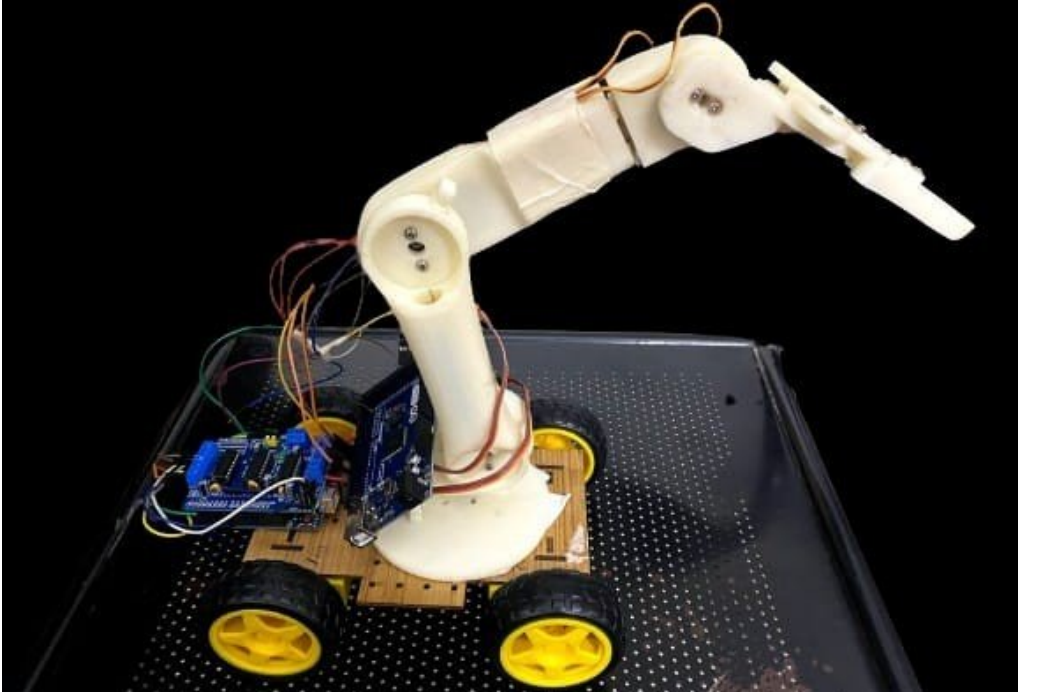


Introduction

- The primary objective of this project is to seamlessly blend the agility and mobility of a car with the power and adsaptibility of a robotic arm .
- By grafting a robotic arm onto the chassis of an automobile , the objective is to create a multifunctional vehicle capable of performing a range of tasks.

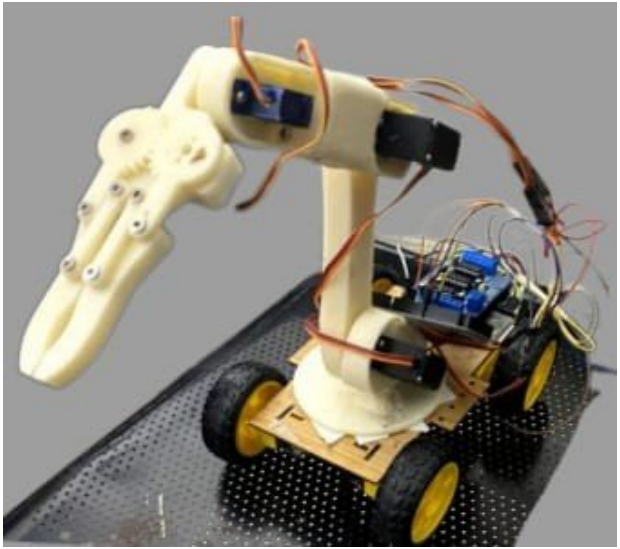


Working

COMPONENTS :-
ARDUINO , MOTOR DRIVER , ROBOTIC ARM , ROBOTIC CAR

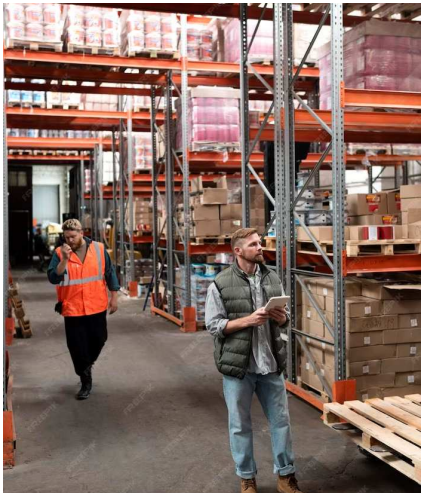
The robotic arm movements are orchestrated througha series of motors that control its joints , enabling functionalities such as lifting , lowering , extending .

The arduino in tandem with the motor driver , coordinates these movements , ensuring precision in operation.



CHALLENGES FACED

We faced several challenges while completing our project
TECHNICAL COMPLEXITY :- Developing the code for two hardwares basically the vehicle and the arm and finding the correct library was very challenging.
CONTROLS :- Controlling the two modes of this machine is challenging , we used bluetooth module to operate the vehicle and arm seperately.



FURTHER REFINEMENTS NEEDED

We will need some design modifications and better material selection for meeting industrial requirements .
Adjustable attachments can be added to ensure meeting requirements of larger crowd.
Various other technologies like sensors can be integrated

HOW IT CAN BE WIDELY USED

By implementing the robotic picking machine, organizations can achieve significant operational benefits, including **increased accuracy**, faster order fulfillment, and reduced labor costs. The system also enhances workplace safety by minimizing the need for manual labor in hazardous environments.

INDIVIDUAL CONTRIBUTION

SAURAV AND XSHITIZ
WORK ON HARDWARE (ROBOTIC ARM AND CAR) AND ENSURING PROPER CONNECTIONS TO MOTOR DRIVER AND BLUETOOTH MODULE

TUSHAR AND UDIT
DEVELOPING SUITABLE CODES FOR ROBOTIC ARM AND THE CAR

YASH
MAKING AND VERIFYINGWIRED CONNECTIONS OF WHEELS AND MOTORS

CONCLUSION

The Robotic Picking Machine Project represents a significant leap forward in enhancing efficiency and productivity in the manufacturing industry. By leveraging cutting-edge robotics and automation technologies, this project paves the way for a future where manual picking processes are replaced by advanced, intelligent robotic systems.

Thanks!