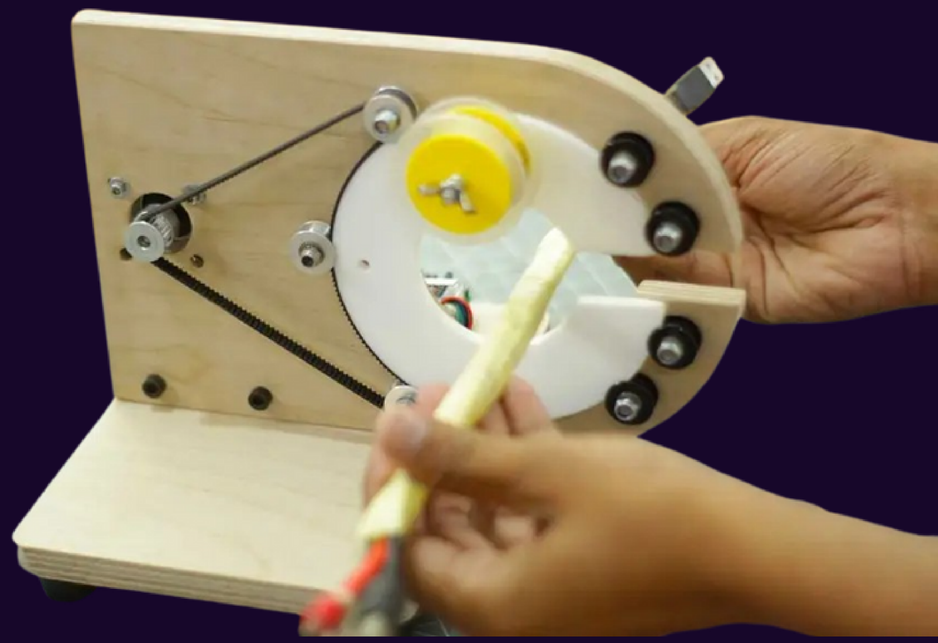
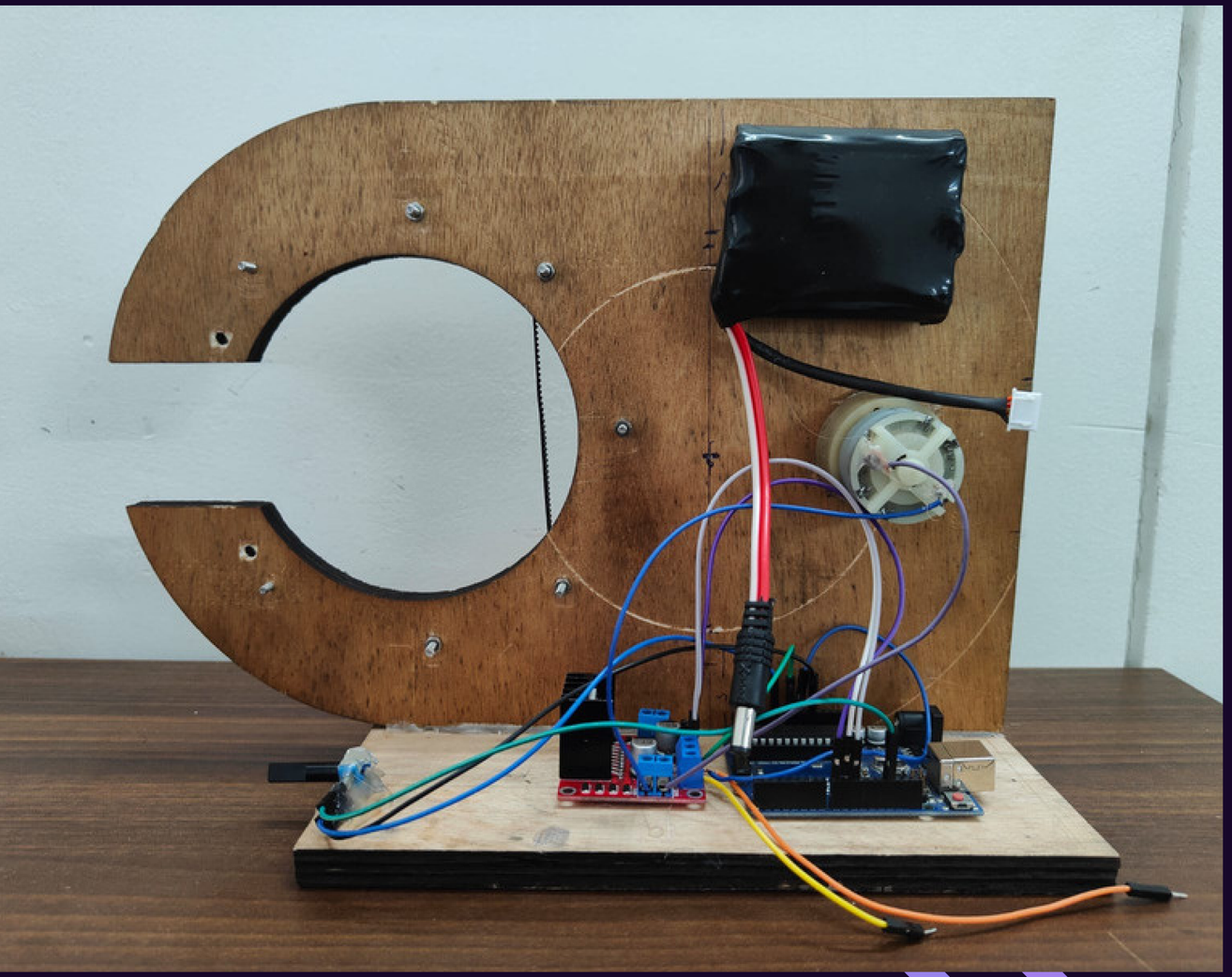
# WIRE WRAPPING MACHINE

**GROUP: F_D**



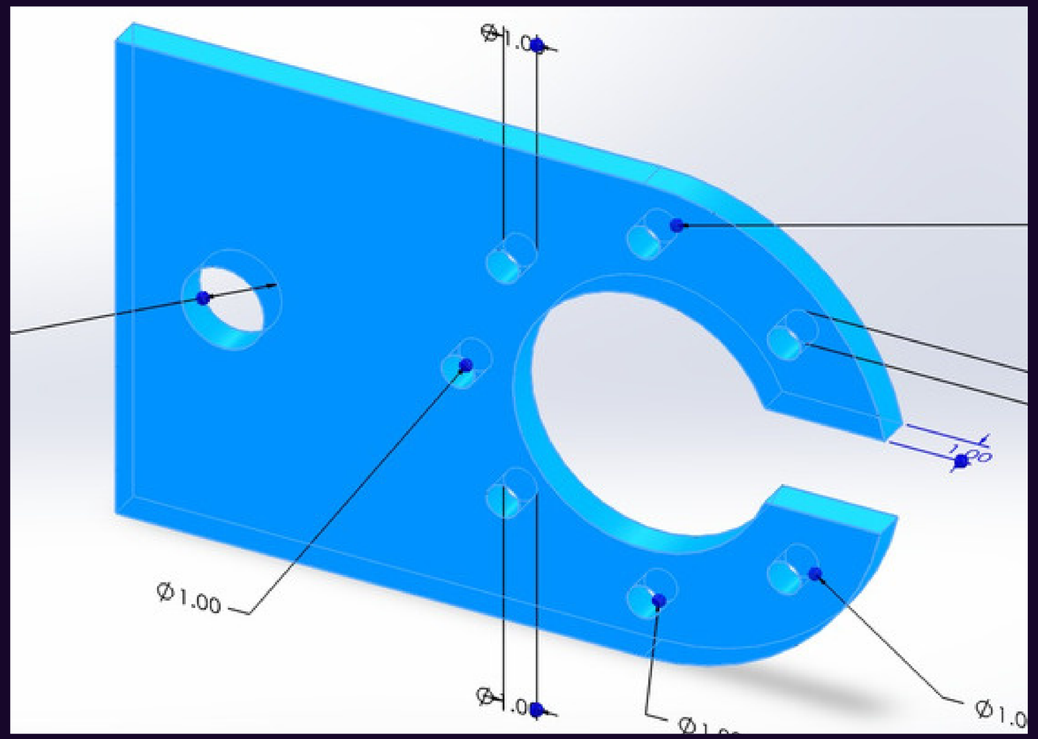
# Introduction

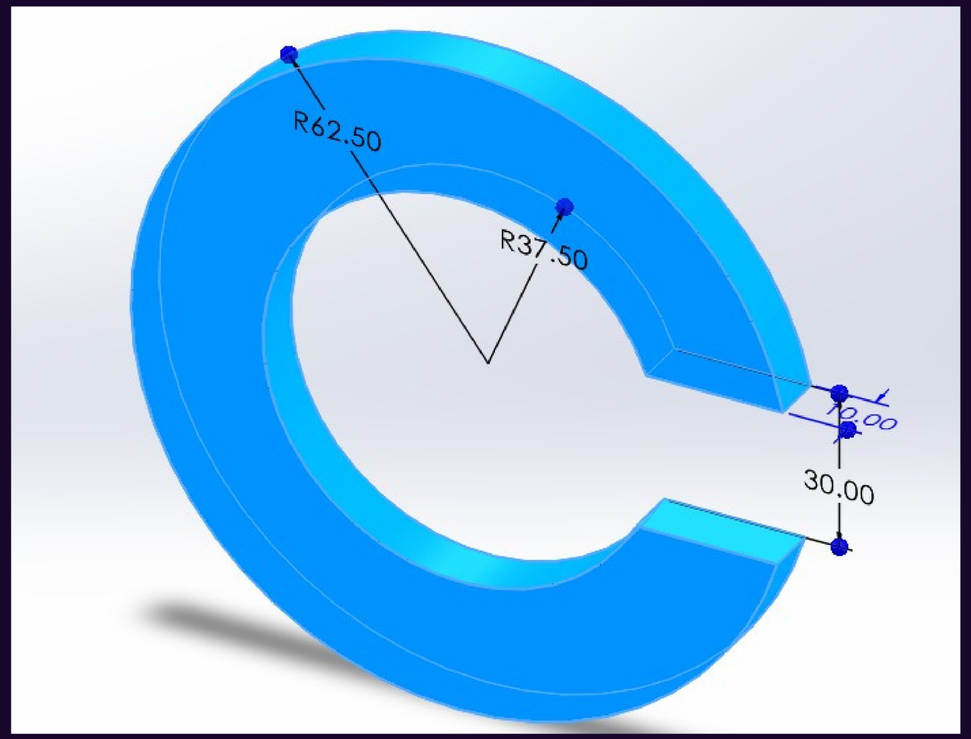


Wire wrapping machine is to automate and improve the efficiency and precision of wire wrapping, creating secure electrical connections. It replace manual wire wrapping, reducing errors and rework and improving productivity. It is an automated tool used in manufacturing to wrap wire around components or terminals.

It includes a wire feed mechanism, a wrapping head and a control system.

# 3D view of Main supports

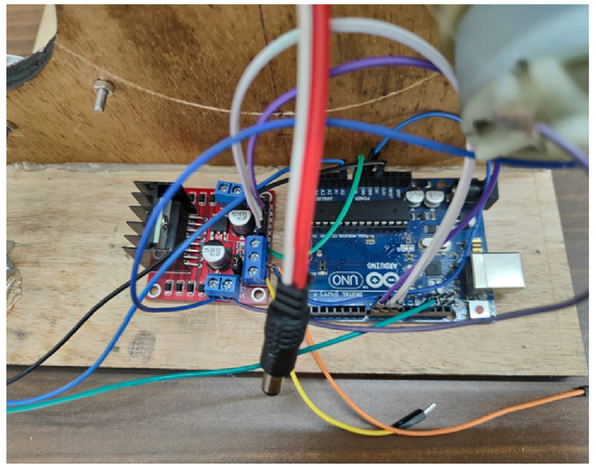


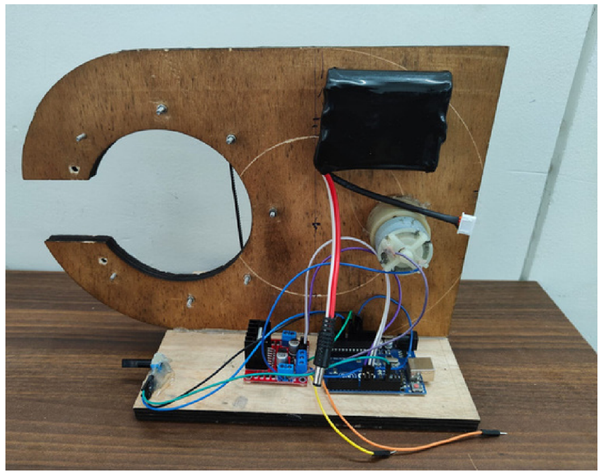
# Main Components

## Pulleys and Belt

## Arduino and Motor driver



## Battery and motor



# Function of Components

01

## Potentiometer

A potentiometer in a wire wrapping machine adjusts the wire tension by changing the circuit resistance. The potentiometer allows for consistent and accurate wire wraps by enabling the machine operator to adjust the wire tension.

02

## Arduino

Arduino is a microcontroller board programmed to control wire wrapping machines. It manages the wire wrapping process wire tension using the potentiometer, and wire feed monitoring.

03

## Motor

The motor  is a component that powers the wrapping head to create wire wraps. The control system manages the motor's speed and direction, which determines the wire wrap's speed and direction.

04

## Pulleys and Belt

Pulleys and belts in a wire wrapping machine transfer power and movement from the motor to the wrapping head. They determine the speed and torque of the wrapping head and require proper maintenance to ensure optimal performance and longevity.

# THANK YOU