

Summative Assignment

# TIME-BOMB DEFUSER

Aradhyaa and Ojaswi



# INITIAL IDEATION



## 1. Initial Idea – NeoPixel as a Timer

We first explored using the NeoPixel ring as a visual timer along with a buzzer, acting as a dramatic countdown

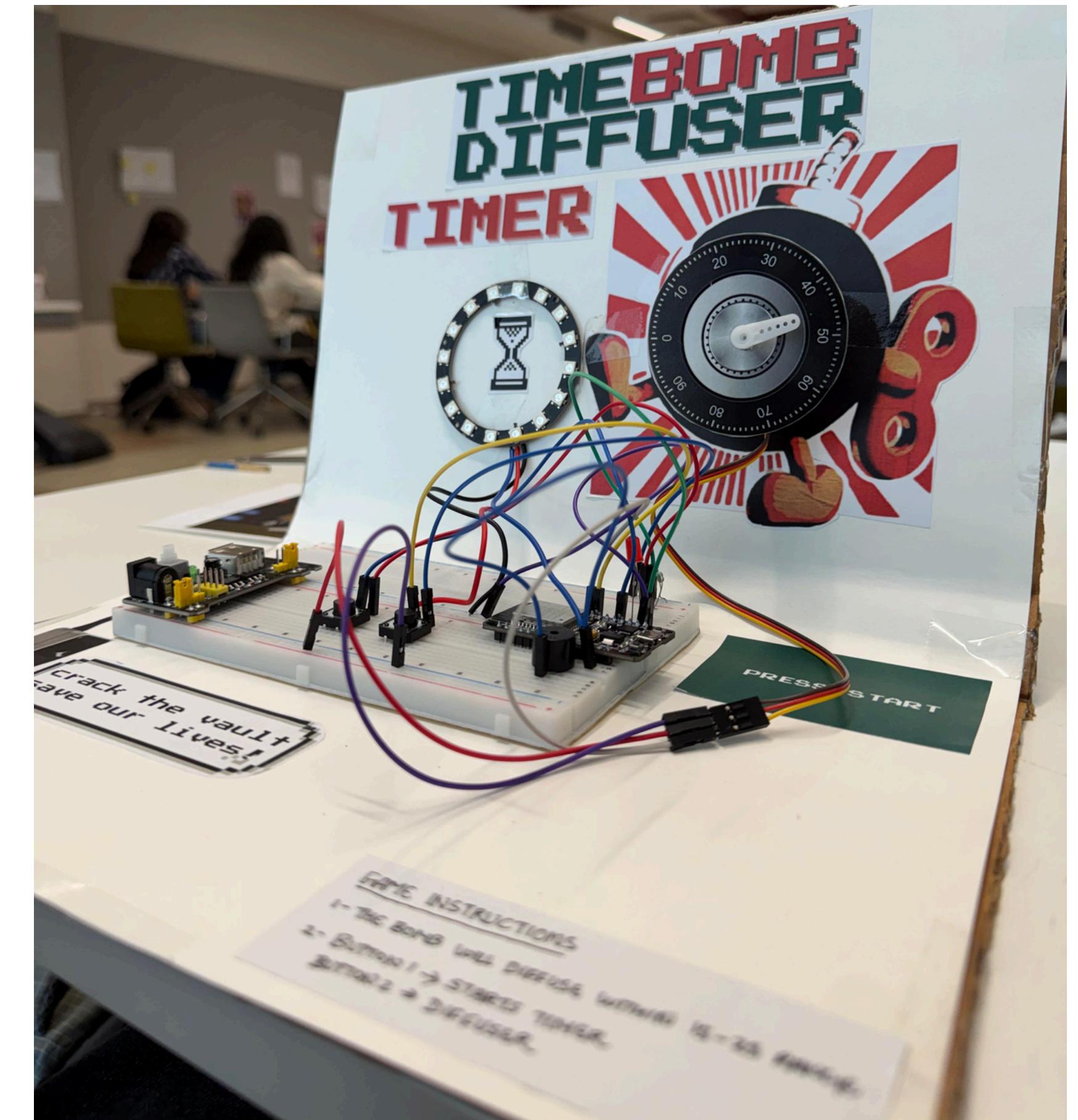
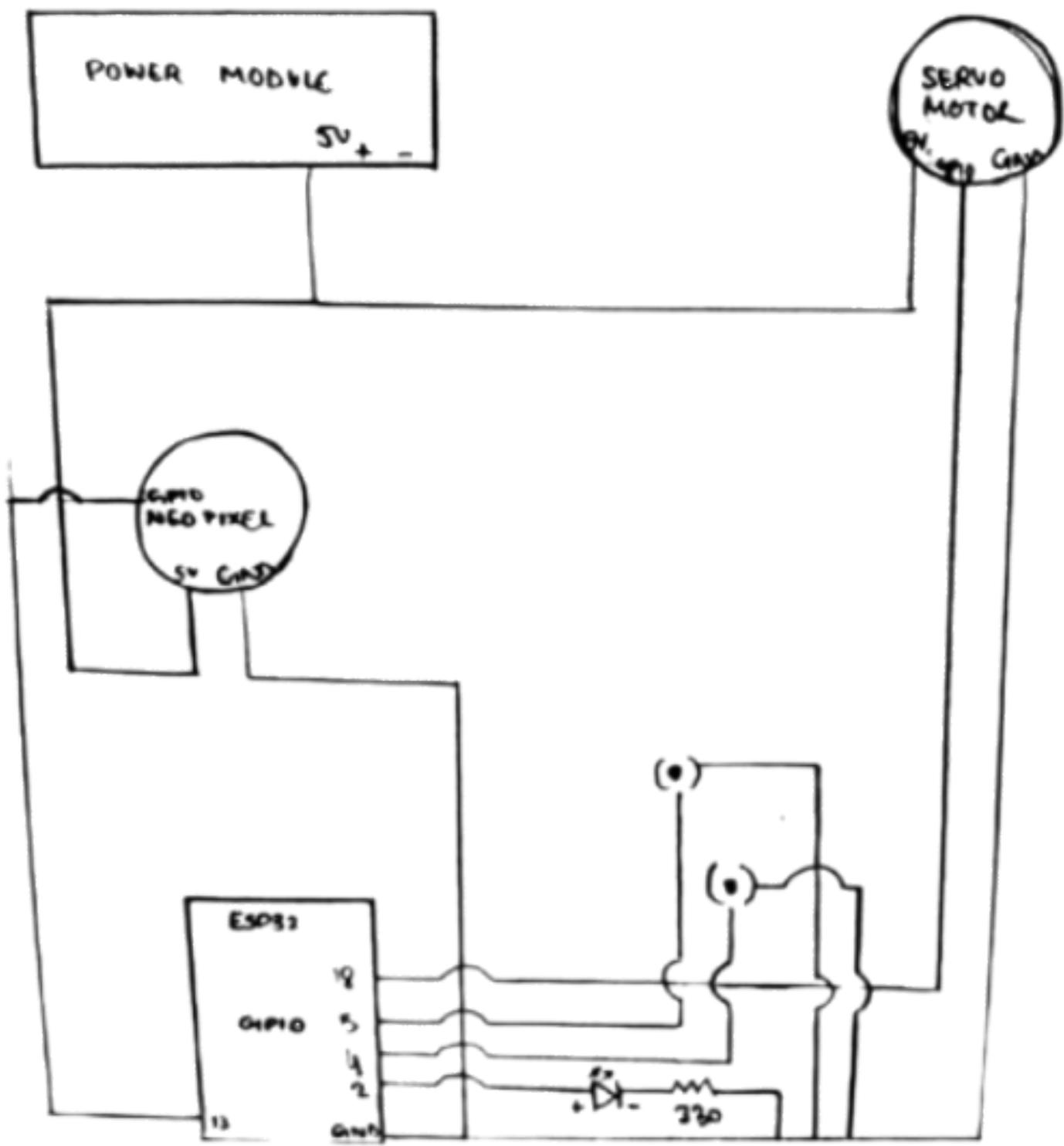
## 2. Experimenting with Servo Motor

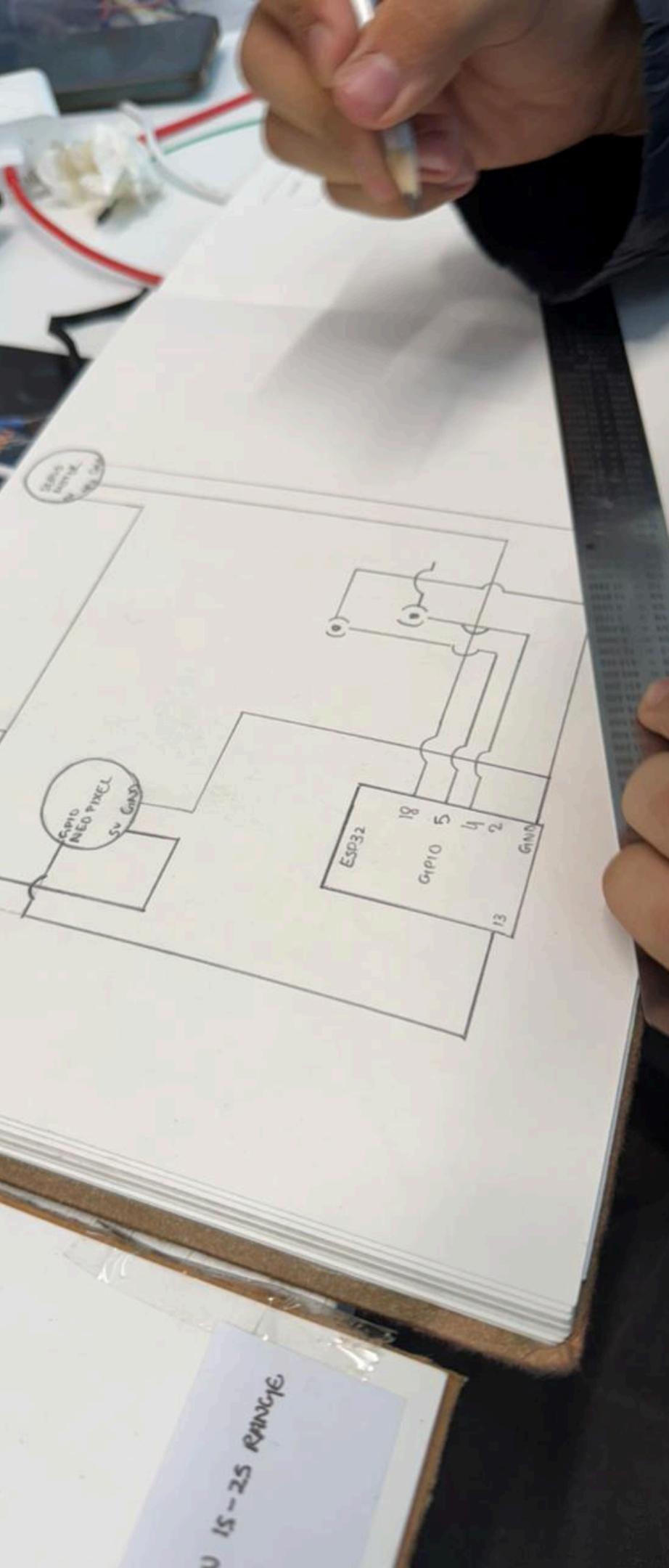
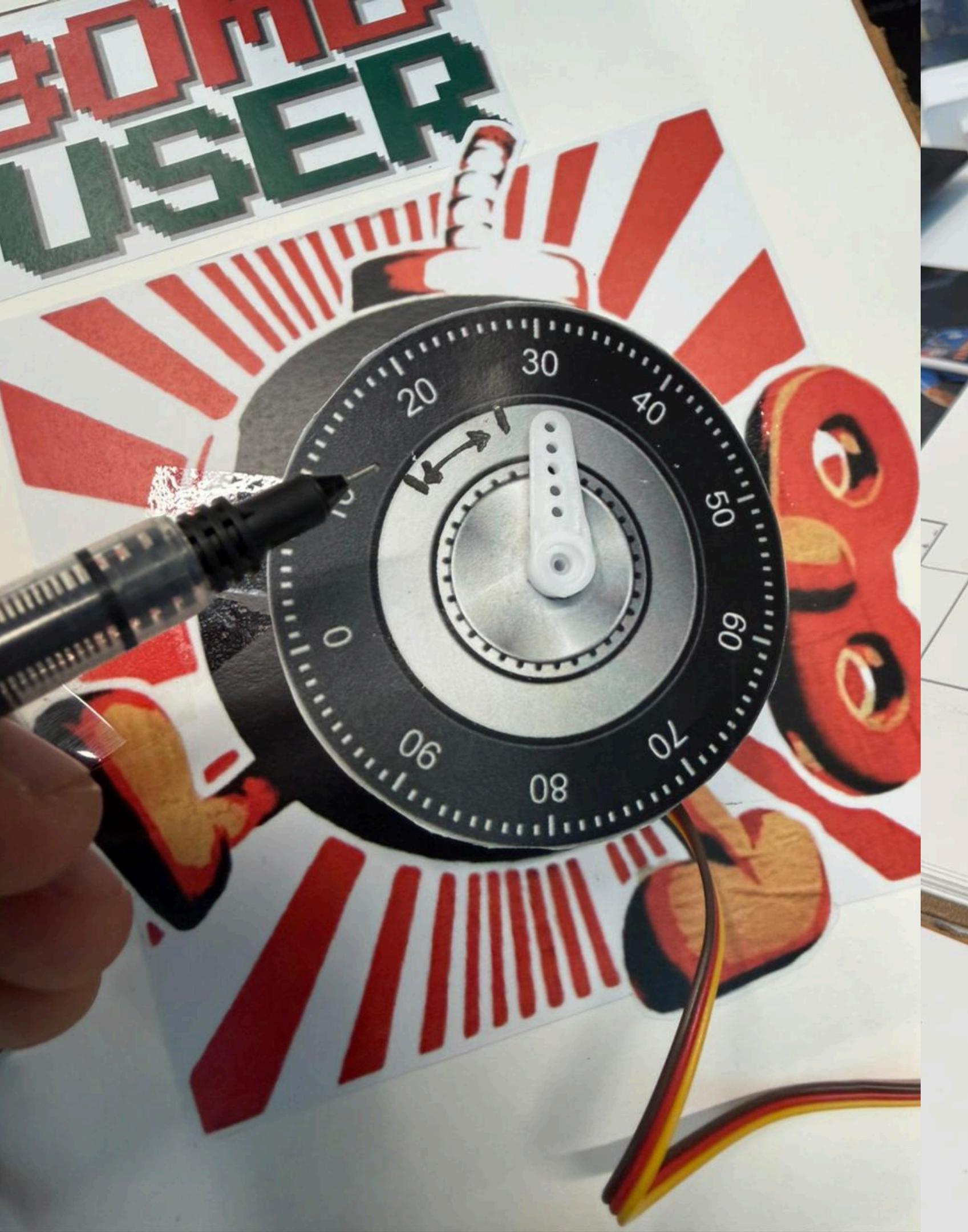
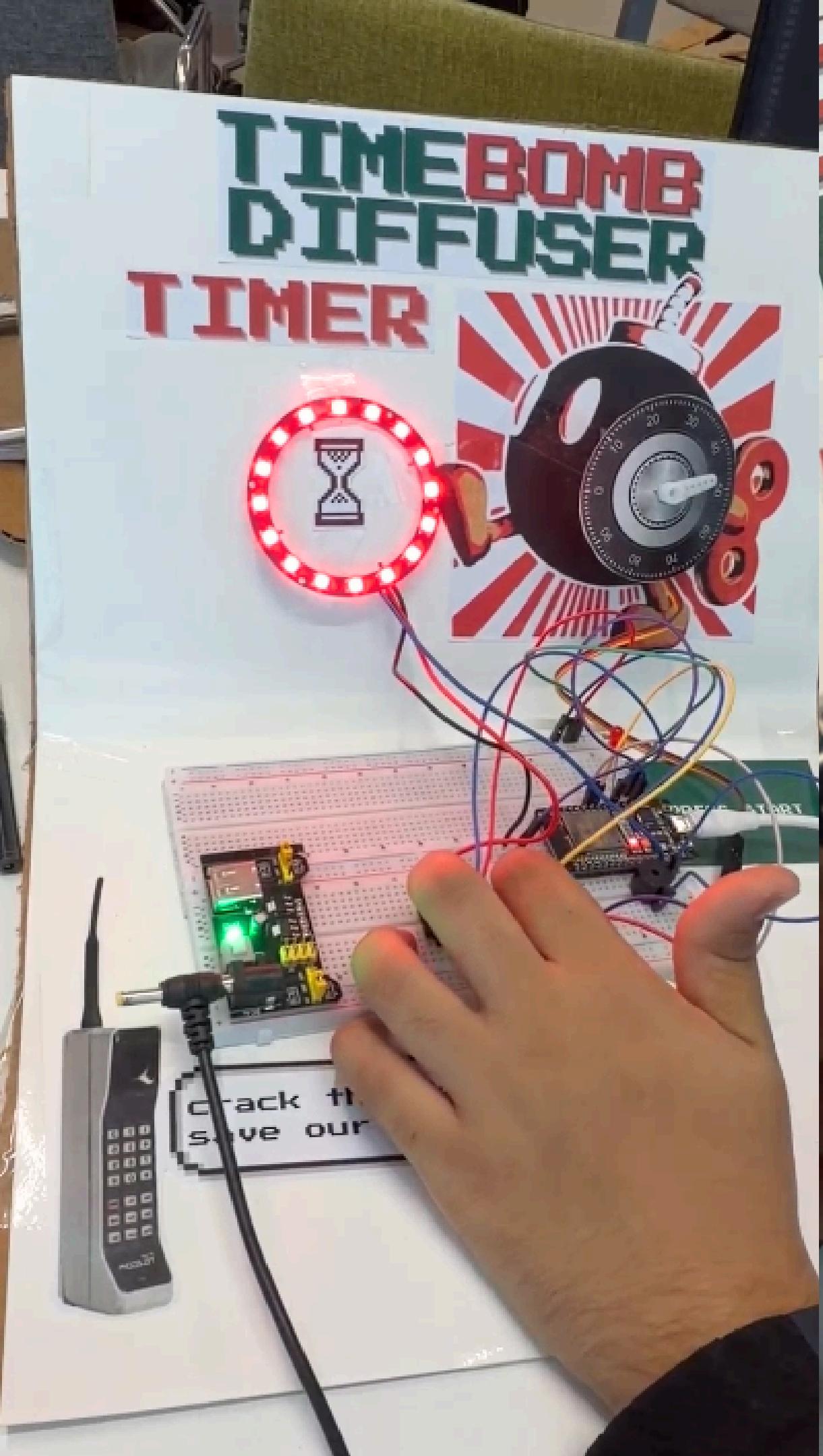
We tried to use the angles as a functionality, taking inspiration from Wheel Of Fortunes, where you have to stop a rotating wheel at a certain point. Then, the timer and dial came together and we had our final idea of The Time Bomb Diffuser.

## 3. Logic Used In Coding

We used ranges in angular positions of the servo motor and added conditions, and linked it to the Neopixel (timer).

# CIRCUIT DIAGRAM





# LEARNINGS AND CONTRIBUTION

"We learned how important timing and synchronization are in embedded systems and hardware power management is just as important as coding."

**Ideation** – Ojaswi and Aradhya

**Coding** – Ojaswi (servo and neopixel), Aradhya (Buzzer and LED)

**Decoration** – Aradhya and Ojaswi

**Circuit Assembly** – Aradhya and Ojaswi

