

PROJECT STATEMENT

Provide an alternate safety device for preventing access to a room or house via the door handle, using a tesla coil design. This design should electrically shock intruders with a high voltage, low current, with the intent to hurt intruders but not injure. This shock is a directed electrical arch out of the handle.

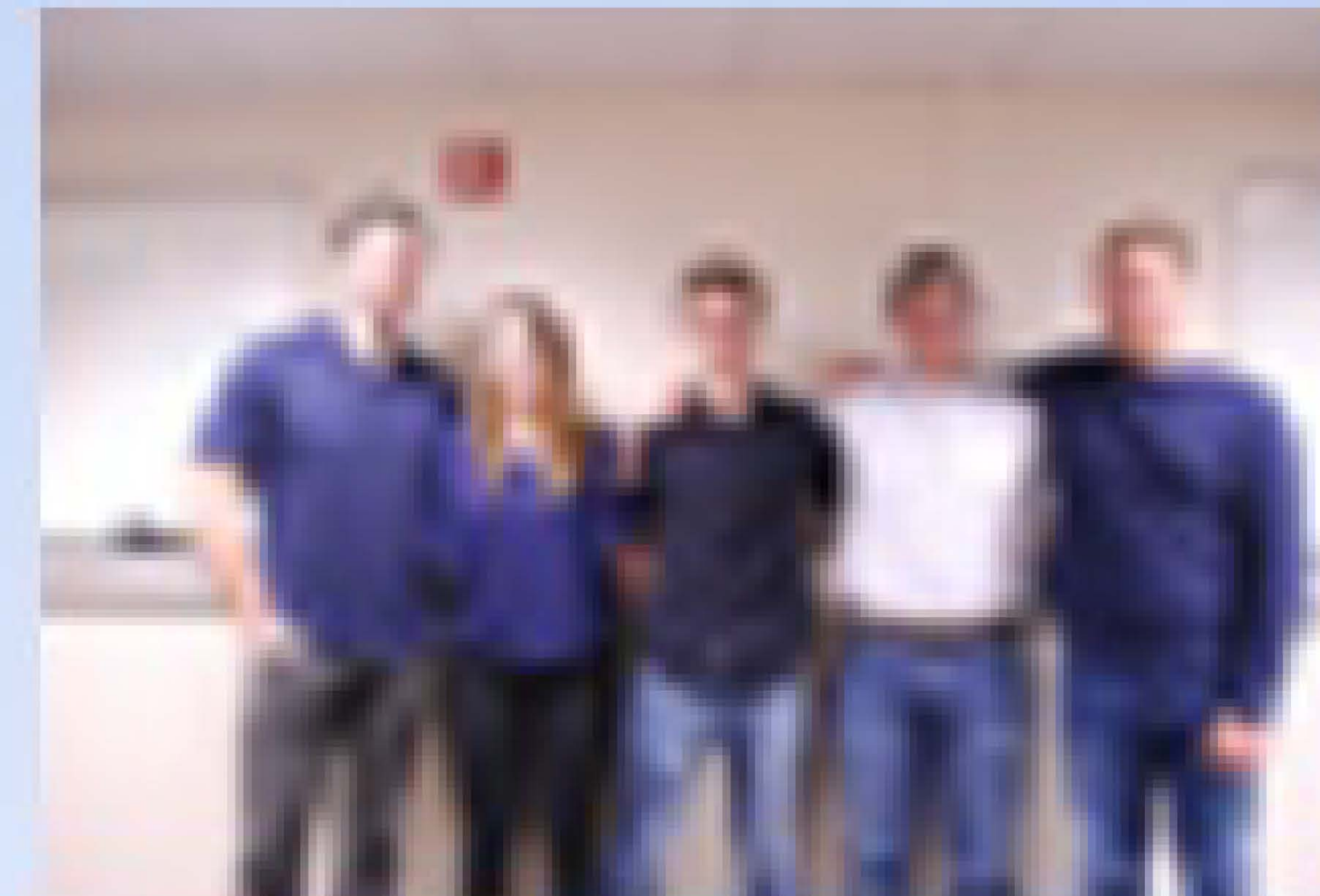
PROJECT GOAL

Create a Tesla coil powered security system that prevents intruders from entering a doorway. it is designed to attend potential intruders without seriously harming them.

PROJECT LEARNING

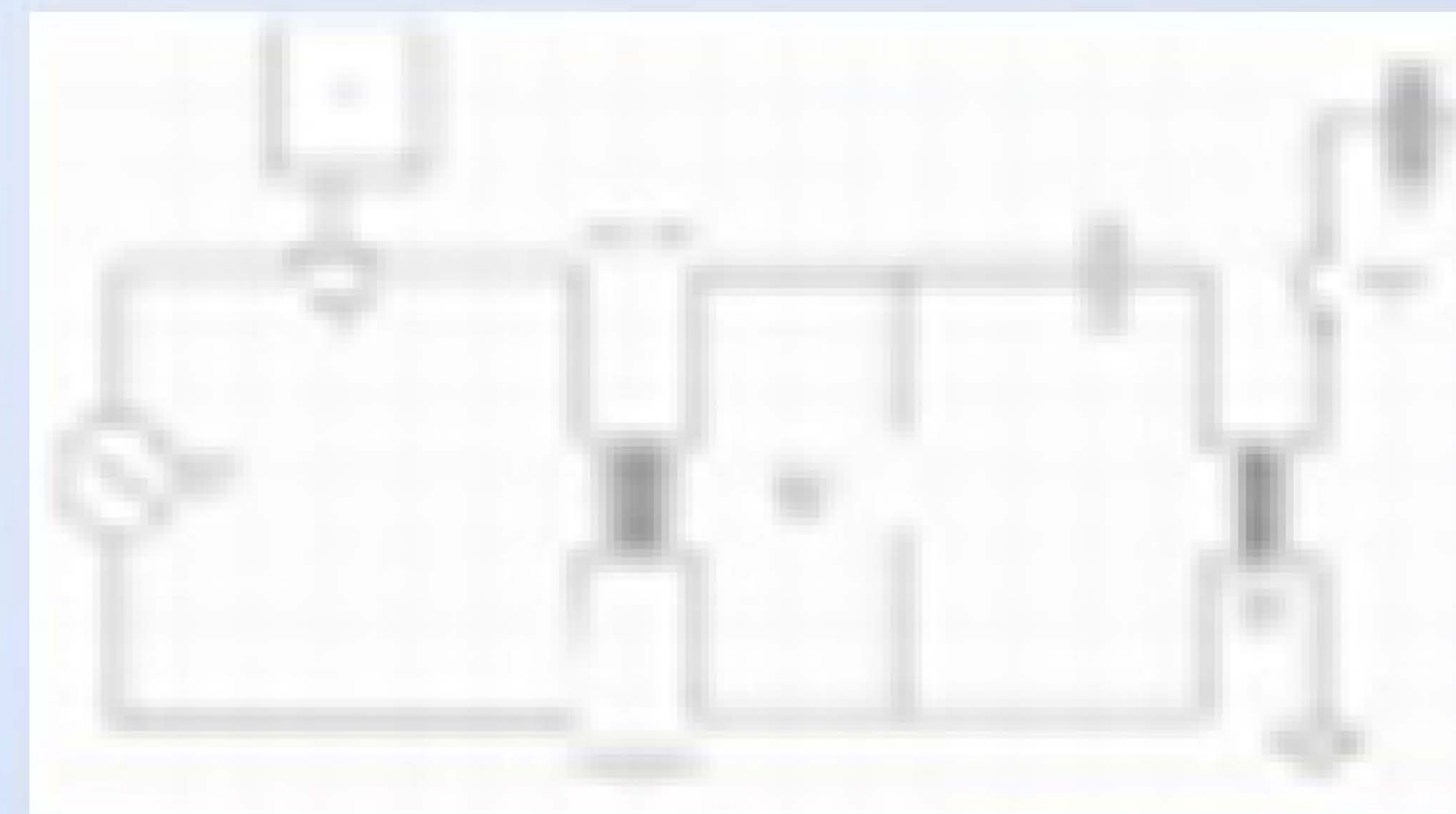
Different coil designs were considered for our tesla coil to create a more efficient circuit and deliver electrical arcs of the desired size.

A specialized door handle was developed for controlling the arc direction.



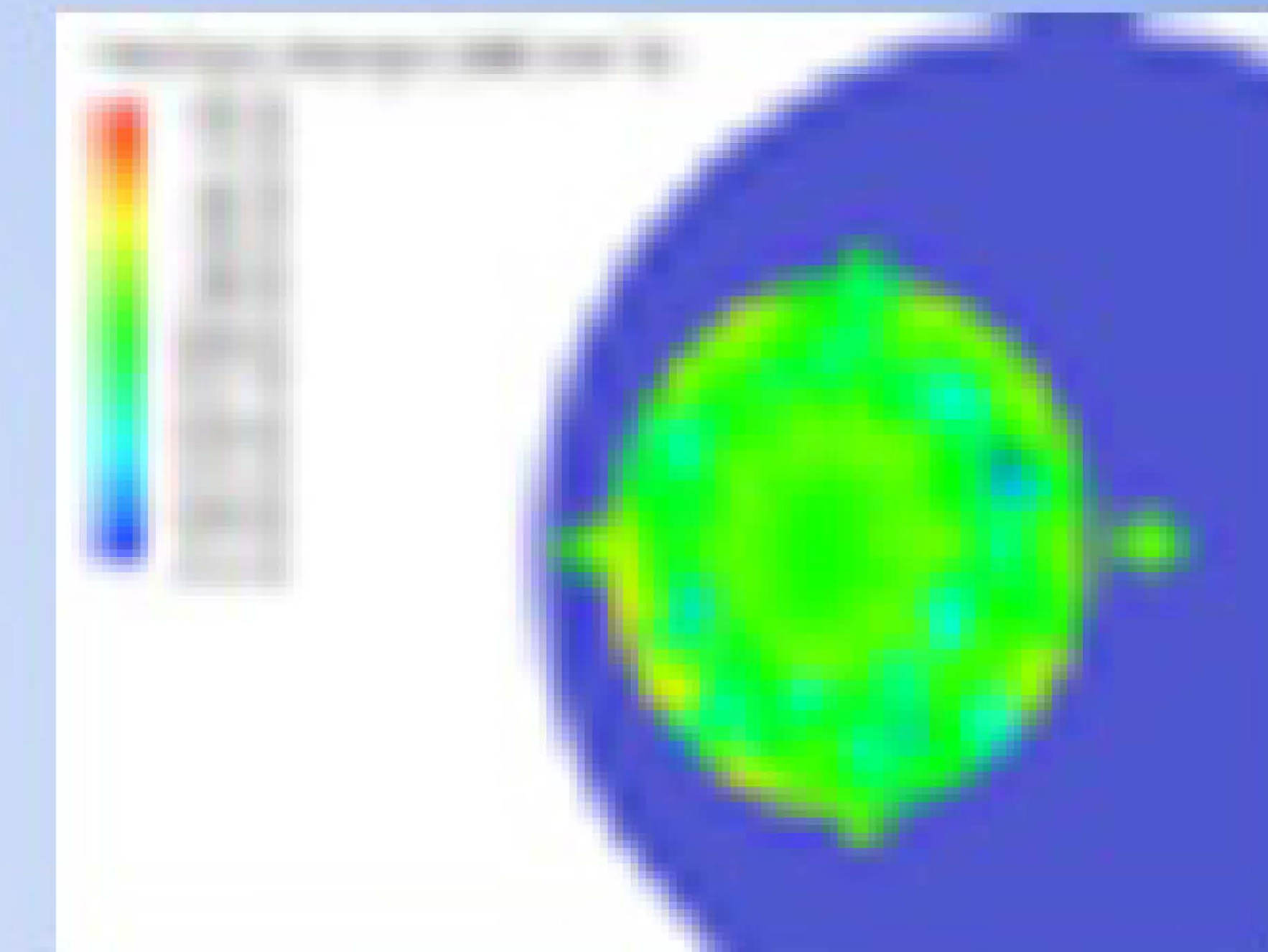
Team Shock the Nation:
Eric Hedine Tim Mattson Danny Pierce
Wyatt King Julia Roach

Circuit Diagram



Circuit Controls

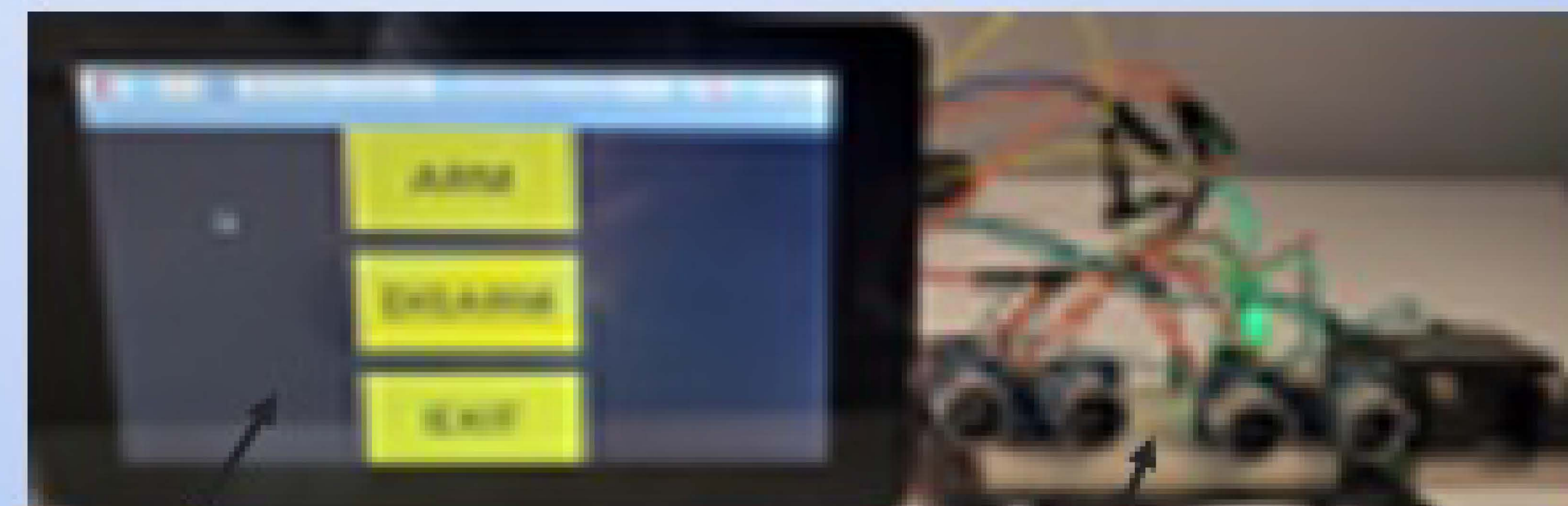
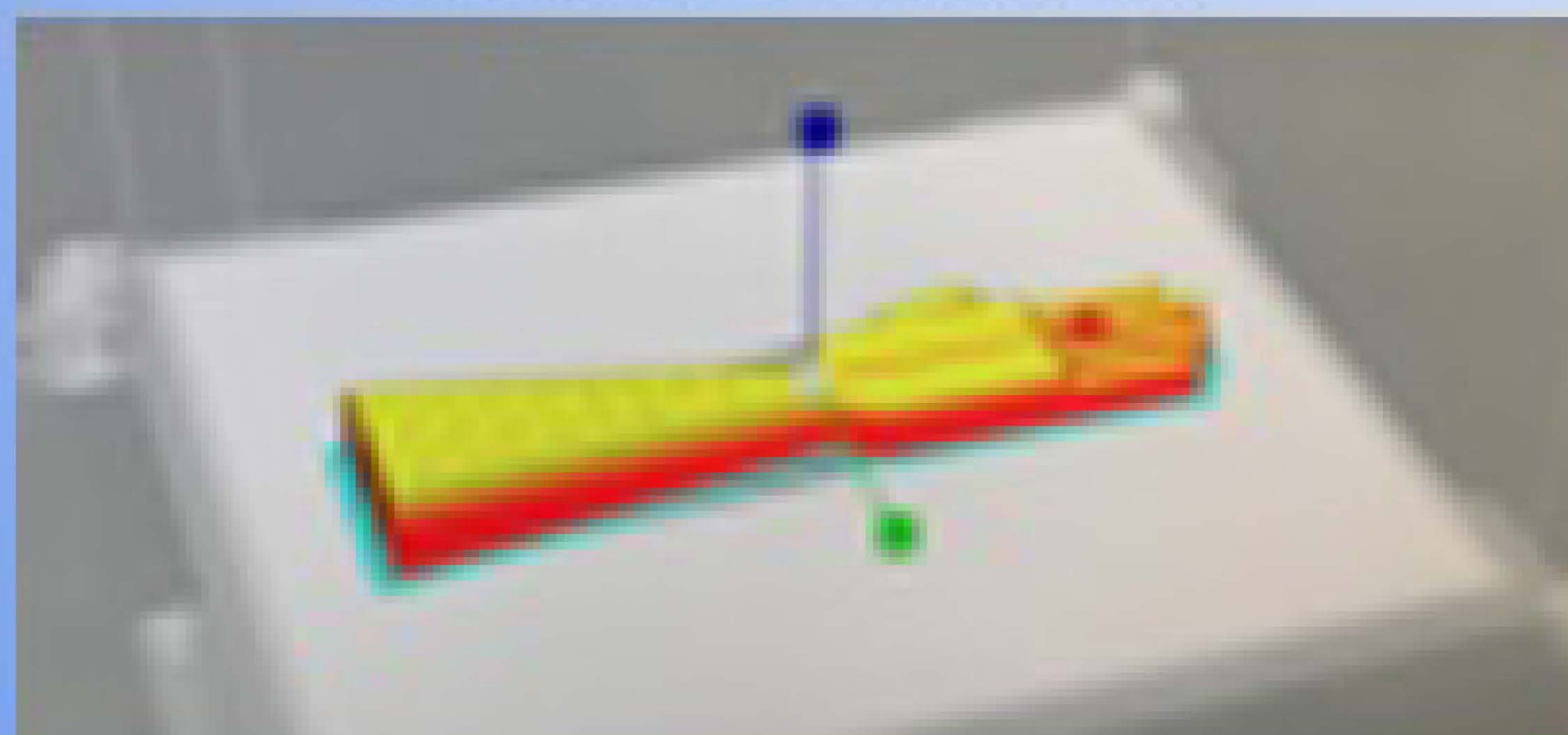
Surface Charge of Door Handle



Handle Design



3D Hand Model for Testing



Touch screen display/Raspberry Pi 3B

**Ultrasonic Sensors
(Movement detection)**

Relay