Sam & Peter

Blindr

For this project we plan to implement an automated way of opening/closing blinds using the cloud. We will use PCB tools and CAD to design a clean way of opening and closing blinds electrically.

Links:

- https://esphome.io/index.html
    - https://esphome.io/guides/getting_started_hassio.html
- https://cdn-learn.adafruit.com/downloads/pdf/adafruit-huzzah32-esp32-feather.pdf
- https://www.home-assistant.io/blog/2021/06/16/power-up-your-esp-projects/

Materials:

- Some form of stepper motor & driver
    - Encoder if regular motor
- ESP32 based microcontroller - likely a D1 mini
- 3D printed enclosure & some way to attach it to the frame
- Coupling hardware
    - Possible 3D print to connect to the wand then some small universal joints
- PCB or proto board
- Buttons/some form of manual control
- Mechanical coupling to blinds mechanism
- Power distribution - one or multiple of the following
    - Battery?
    - Solar panel?
    - Wall wart?
- (Stretch goal) sensors to automatically open/close

Grading Scale:
A: Blinds open/close with via WiFi (home assistant or similar)
B: Blinds open/close with realistic user focus
C: Blinds open/close mechanically