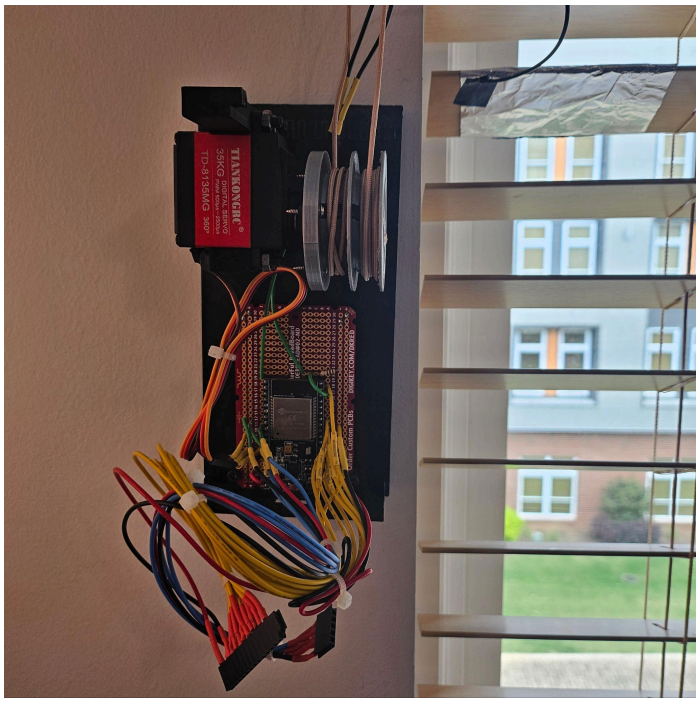
CSC 428 Blinds Project

The goal of this project was to create a device that was capable of controlling the pull cord blinds in my apartment's bedroom remotely without removing the current functionality.

Final Product



Parts Used

Part	Price
ESP 32	$15.88
Rotary Encoder	$7.99
Continuous Servo Motor	$29.99
1.54" eInk Display	$24.99
M2 Screws	$12.99
Solderable Breadboard	$1.10
Black 3D Printing Filament (Fab Lab)	-
3M Screws (Fab Lab)	-
Wire (Fab Lab)	-
Total:	$92.94

Arduino Libraries

- Adafruit ThinkInk: This library was used to control the eInk display via SPI (Serial Peripheral Interface).
- Standard Library: The standard library was used for its inclusion of strings.
- ESP32 Servo: This library was used to control the servo motor via PWM.
- WiFi: This library was used to connect to a LAN and set the ESP up as a web server.

Code

The code for the project can be found in its GitHub repository.

3D Prints

The .stl files used for this project can be found here.

Wiring Diagram