

USER TESTING ROUND 1

Questions

- What are some of the pain-points of the project so far?
- What do you like about the project?
- Are you more likely to use a combination of light and temperature to automate blinds or would you just use one or the other?
- Is it important for you to see the status of the blinds?

Responses

- User 1
 - I don't like how I have no way of opening or closing the blinds on my own.
 - I like the simplicity of the website.
 - I can see myself using a combination of the two more often.
 - Yes.
- User 2
 - There aren't many modes on the website.
 - The light mode is a very useful way of automating the blinds.
 - I would use a combination like if the temperature was too high and there was no light, only would the blinds shut.
 - Yes.
- User 3
 - The robot would break if I tried to open the blinds using the stick.
 - I like that you can use temperature and lighting.
 - I am more likely to use a combination rather than each one individually.
 - Yes.
- User 4
 - There's no way to just open or close the blinds manually using the physical blind adjustment tool.
 - I would use the automation based on temperature a lot.
 - I am more likely to use a combination.
 - Yes.

USER TESTING ROUND 2

Questions

- What are some of the pain points of the project so far?
- What do you like about the project?
- Are the default thresholds for the sensors adequate or would it be better if the user could customize them?

Responses

- User 1
 - I am limited to opening or closing and often I like to keep my blinds in the middle
 - I like all the different modes that I can choose from
 - I would like to be able to change the temperature threshold
- User 2
 - I think the user should be able to set where they want the blinds to open or close to.
 - I like that we can manually adjust the blinds with the dial. That's a good improvement in my opinion.
 - The threshold for temperature may be more likely what I would change and for most people this is probably the case too since people would likely have different preferences for temperature
- User 3
 - It's only possible to open or close the blinds
 - I think it's good that there's a way to see if the blinds are open or closed now.
 - I would like as much customizability as possible.
- User 4
 - I wish I had the ability to open and close the blinds from the website.
 - I like the organization of the website.
 - Sunlight is fine, but I don't know if I would use 90 degrees for temperature.

EVALUATION

Laboratory test

(green = passed, red = failed)

- "Light Mode"
 - Exposure to sunlight
 - Servo moved to 180 degrees
 - Exposure to porch light at night
 - Servo moved to 180 degrees
 - Removing all light
 - Servo moved to 0 degrees
- "Temperature Mode" with temp threshold set at 50 degrees
 - Ambient temperature is above 50 degrees fahrenheit
 - Servo moved to 0 degrees
 - Ambient temperature is below 50 degrees fahrenheit
 - Servo moved to 180 degrees
- "Temperature Mode" with temp threshold set at 70 degrees
 - Ambient temperature is above 70 degrees fahrenheit
 - Servo moved to 0 degrees
 - Ambient temperature is below 70 degrees fahrenheit
 - Servo moved to 180 degrees
- "Light or Temperature Mode" with temp threshold set at 70
 - Ambient temperature above 70 degrees fahrenheit and exposure to sunlight
 - Servo moved to 0 degrees
 - Ambient temperature above 70 degrees fahrenheit and no exposure to sunlight
 - Servo moved to 0 degrees
 - Ambient temperature below 70 degrees fahrenheit and exposure to sunlight.
 - Servo moved to 180 degrees
 - Ambient temperature below 70 degrees fahrenheit and no exposure to sunlight
 - Servo moved to 0 degrees
- "Light and Temperature Mode" with temp threshold set at 70
 - Ambient temperature above 70 degrees fahrenheit and exposure to sunlight
 - Servo moved to 180 degrees
 - Ambient temperature above 70 degrees fahrenheit and no exposure to sunlight
 - Servo moved to 0 degrees
 - Ambient temperature below 70 degrees fahrenheit and exposure to sunlight.
 - Servo moved to 180 degrees
 - Ambient temperature below 70 degrees fahrenheit and no exposure to sunlight
 - Servo moved to 180 degrees
- Turning potentiometer
 - Changing potentiometer threshold to 30
 - Webpage indicates closed when potenter is twisted left moving servo less than 30 degrees
 - Webpage indicates open when potentiometer is twisted right moving servo more than 30 degrees
 - Changing potentiometer threshold to 50

- Webpage indicates closed when potentiometer is twisted left moving servo less than 50 degrees
 - Webpage indicates open when potentiometer is twisted right moving servo more than 50 degrees.
- Setting lower limit to 10 and upper limit to 160
 - Potentiometer Mode
 - Lower: servo moves to 10 degrees, Upper: servo moves to 160
 - Light Mode
 - Lower: servo moves to 10 degrees, Upper: servo moves to 160
 - Temperature Mode
 - Lower: servo moves to 10 degrees, Upper: servo moves to 160
 - Light or Temperature
 - Lower: servo moves to 10 degrees, Upper: servo moves to 160
 - Light and Temperature
 - Lower: servo moves to 10 degrees, Upper: servo moves to 160

Survey

Questions

- Is the website easy to use and if not, why?
- Does the robot offer all the features that you would need for automating blinds and if not, why?
- Does the robot deliver on its goals?
- Is this something you would consider using and if not, why?

Responses

- User 1
 - Yes.
 - Yes.
 - It delivers on its goals of being autonomous in an ideal situation. I am dubious. about the reliability of the sensors.
 - Yes.
- User 2
 - Yes.
 - Yes.
 - I believe it does work well at the automation and it executes that well in all the modes but I think some people may be more interested in using it to set a schedule for opening and closing, but there's no way to do that on the website.
 - Yes.
- User 3
 - It's easy to use, but I think it has too much going on.
 - I think it offers too many unnecessary modes.
 - Yes.
 - Yes.
- User 4
 - Yes, it's very simple and easy to use.
 - No, I wish it had a feature to work as an alarm that could be scheduled.
 - Again, no because you claim that it is an alarm but you are not offering any way for the user to schedule their own alarms. You are assuming everyone wants to use the robot as a "natural" alarm that only opens the blinds.
 - I wouldn't for the reasons I discussed in the previous two questions. It doesn't deliver on its goals.