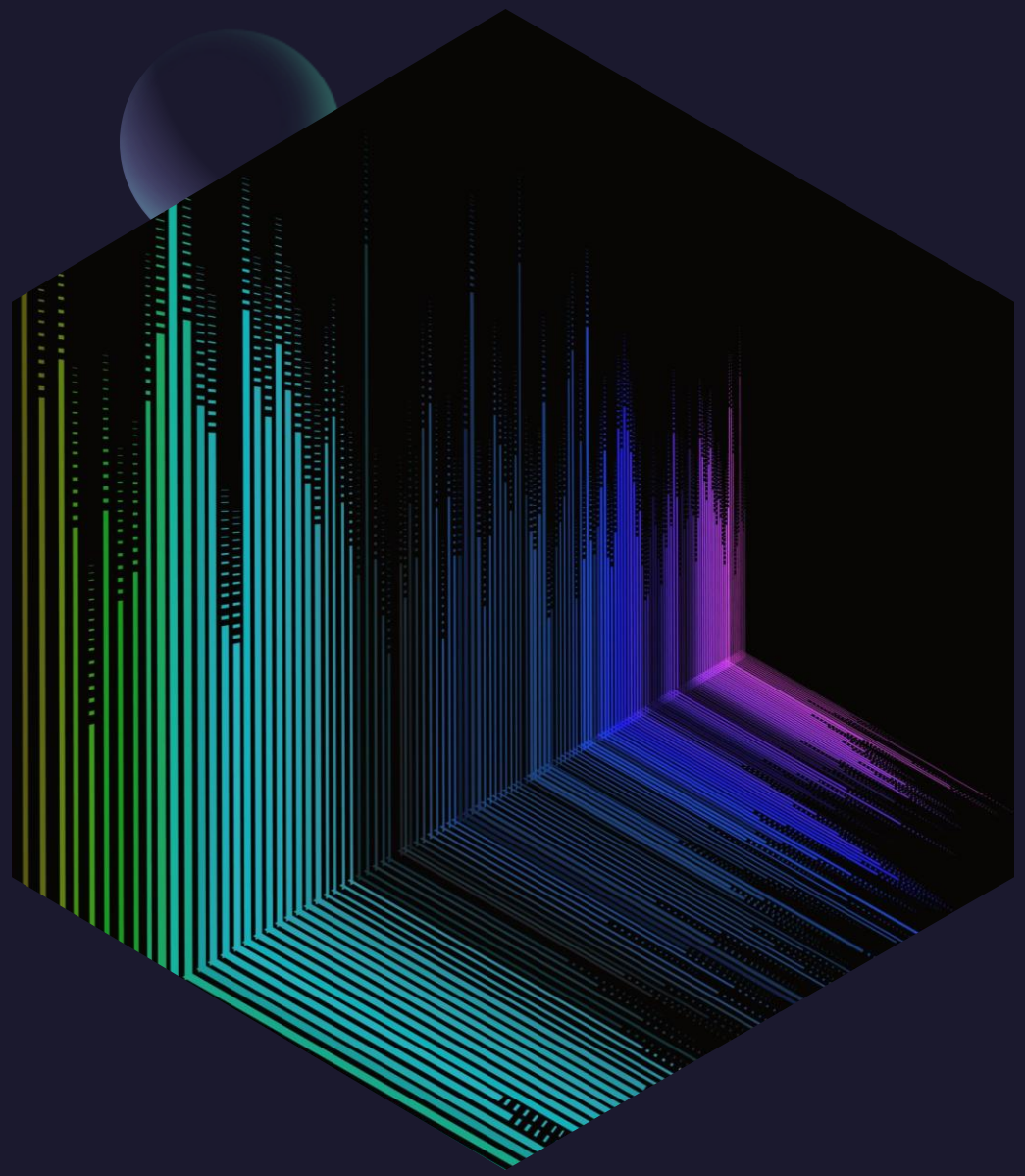
Smart Cooler

Week 28 Feb 10 – Feb 16

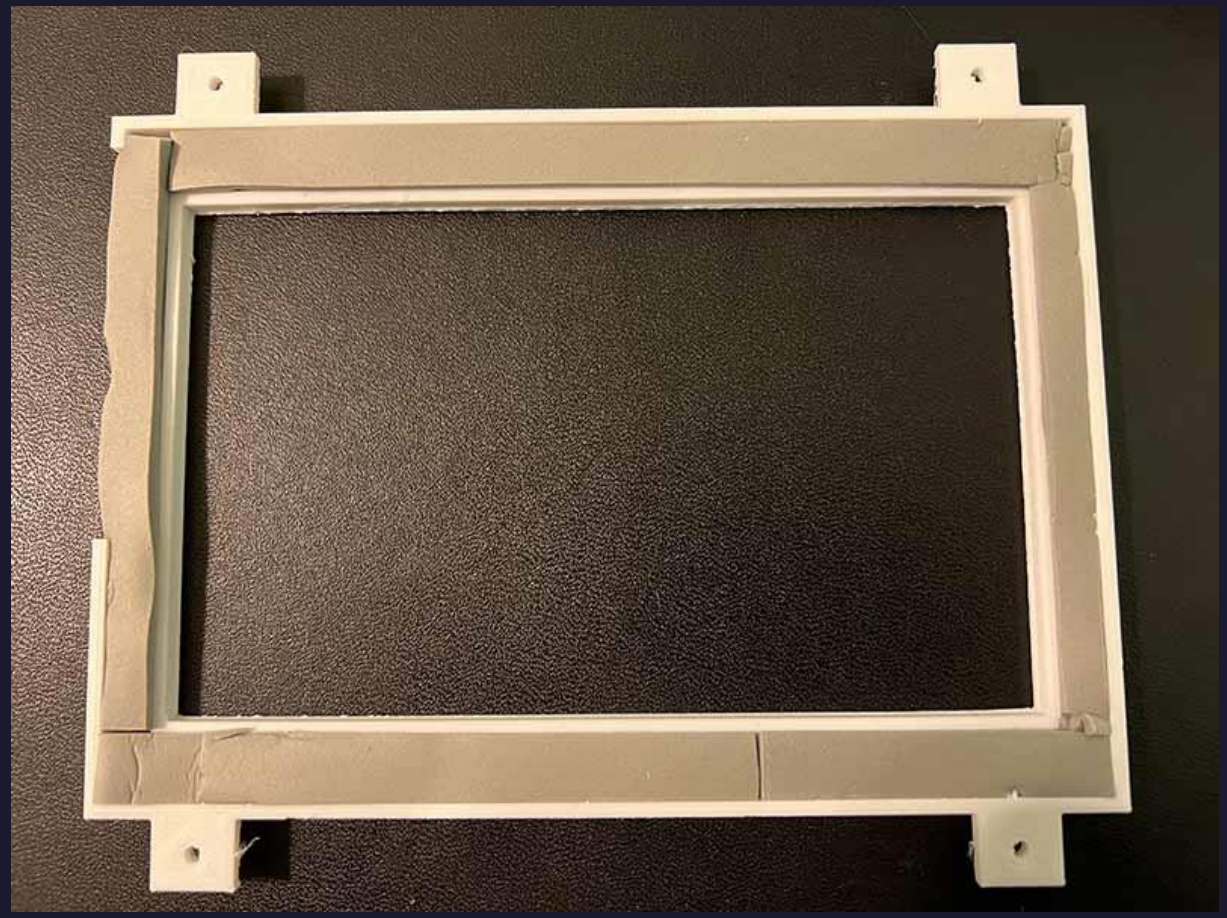


Progress Made

- Added to Chapter 3 of the Paper
- Added Gasket to Monitor Bezel
- Started Design of Locking Mechanism
- Added Profiles to Settings
- Added Ice Replacement Notification

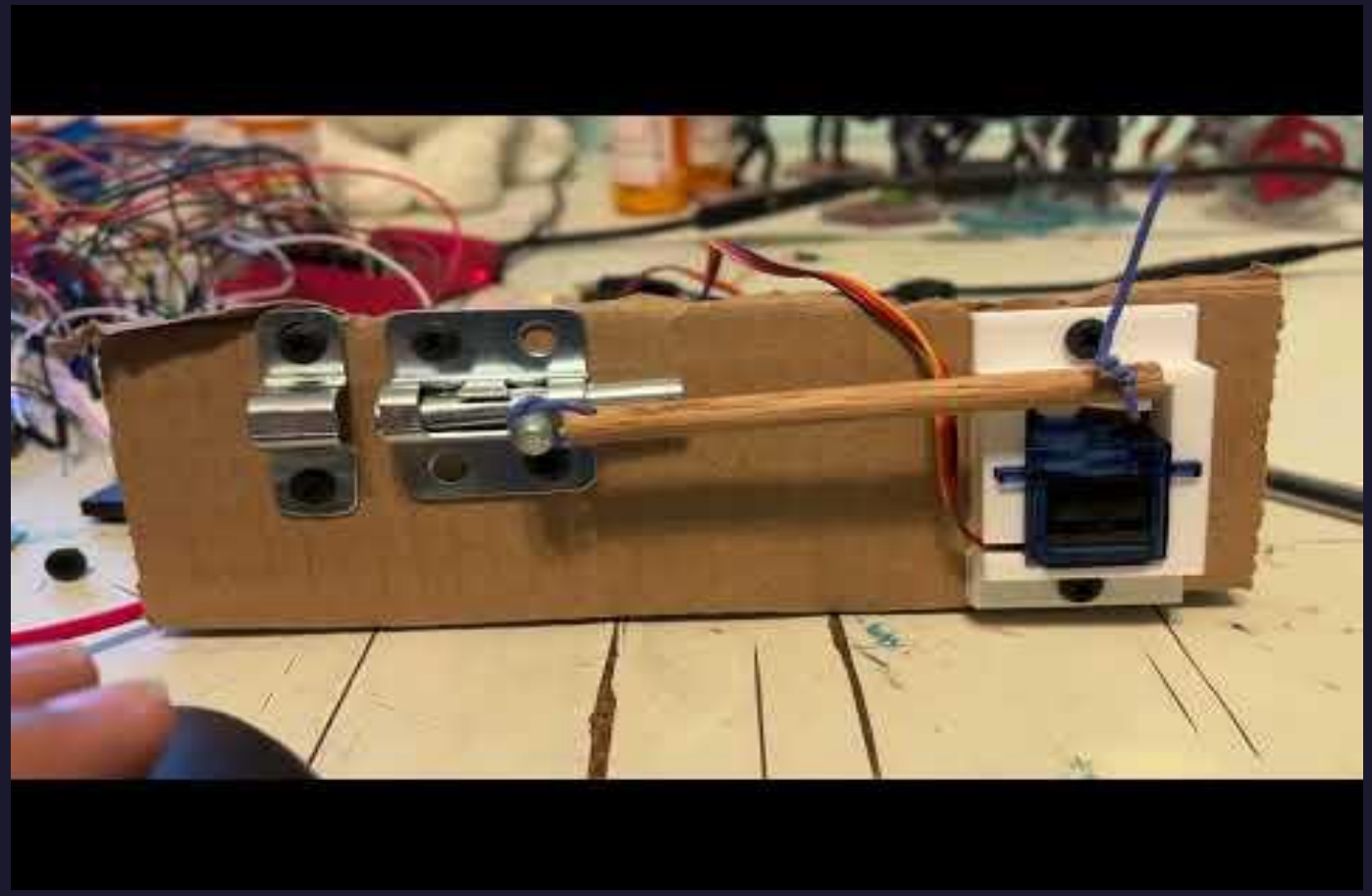
Gasket Fitted

- Weatherstripping was purchased to create a gasket around the 3d printed parts for the monitor bezel.
- The wire cover was not fitted as it needed to be reprinted to allow for tabs to glue the pieces together.



Locking Mechanism

- Bought a metal sliding lock from the hardware store.
- Used a wooden dowel as a rod, and wire to tie the rod to the servo arm and sliding lock knob.
- The servo rotates from 0 to 90 degrees, opening and closing the sliding lock.



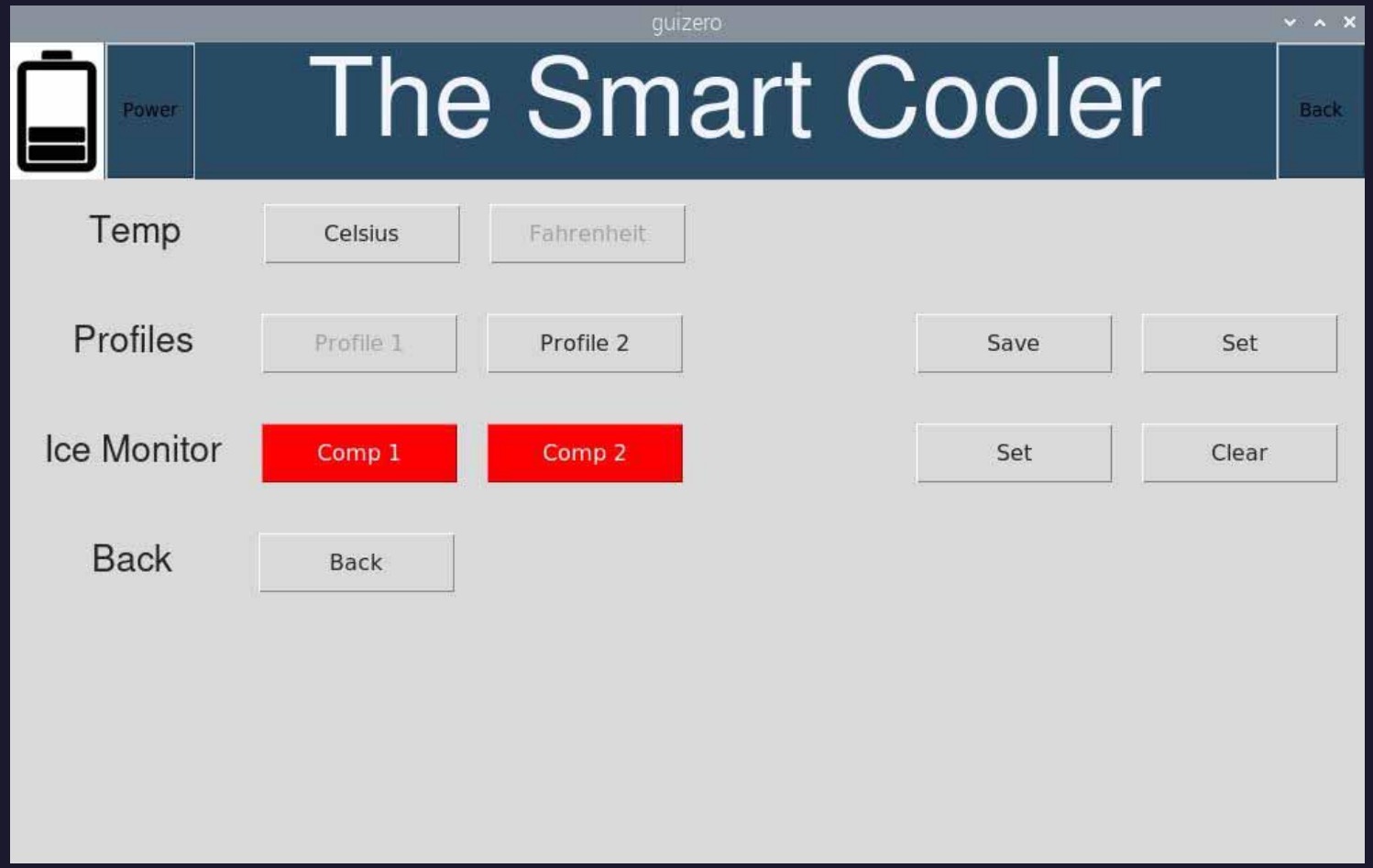
Added Profiles to Settings

- Profiles can now be saved and set.
- First, the user selected the profile, there are two to select.
- Next, the user can either save the current settings as a profile, or set the selected profile as the current settings.
- The following video shows the user first selecting Profile 2, then setting the temperature units to Fahrenheit and the LED color to Blue. In Profile 1, the temperature units is set to Celsius and the LED color is Red. The profile is then saved. Profile 1 is selected and set, changing the LED color to red and the temperature units to Celsius. Then Profile 2 is selected and set, changing the LED color to blue and the temperature units to Fahrenheit.


The Smart Cooler
Temp
Profiles
Job Monitor
Back

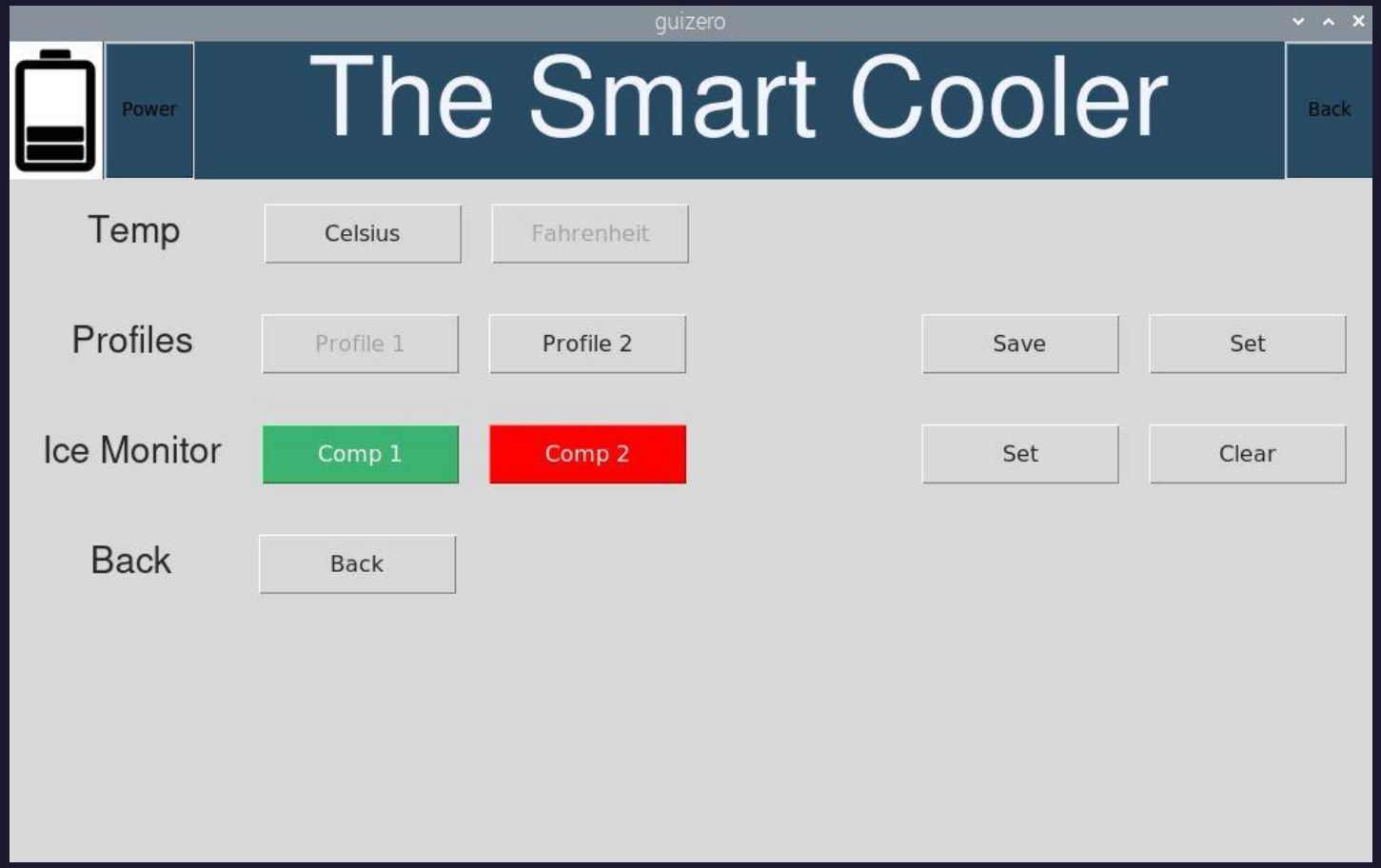
Ice Replacement Notifications

- The ice monitoring works detecting when the temperature has reached a certain threshold, then sending a notification.
- The compartment buttons are initially colored in red, meaning that ice notification has not be activated yet.



Ice Replacement Notifications

- First, the user places ice in the compartment. Then, the compartment is selected, and the Set button is pressed. The compartment is then colored green, this means it is activated.
- When the threshold is reached and the notification is closed, the compartment will reset to red indicating it is deactivated.



Ice Replacement Notifications Video

- The following video shows how the ice notification works.
- The user first goes to Settings, then the More option to see the Ice Monitor setting. Compartment one is selected and then activated, indicated by turning green.
- In the video, fingers are placed on the temperature sensor to raise the temperature. Once the temperature hits 90 degrees, the notification will display saying the ice needs to be replaced.
- Going back to the settings screen, it can be seen the compartment button is red again, meaning it has been deactivated.


The Smart Cooler
Speakers
On
Off
GPS
On
Off
Lock
On
Off
LED
On
Off
Compartment Temperature
Temp 1:
80.4 F
Temp 2:
74.5 F

Goals For Next Meeting

- Assemble and dry fit printed parts
- Design parts for 3d Printing
- Continue work on Project Report
- Continue work on mobile app