**Capstone project IoT Bootcamp 2023**

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The idea behind my capstone project is an interactive sculpture that leads people through a grounding exercise. The exercise is based on the "5-4-3-2-1" coping technique for anxiety:

* Five things you see.
* Four things you can feel.
* Three things you can hear.
* Two things that you can smell.
* One thing that you taste.

The purpose of this exercise is to help ease anxiety and relieve tension for people who are experiencing stress or a difficult emotional state. It opens with a button that says '*Get Grounded.'* When the button is pressed, colored neopixels in multiple shapes slowly illuminate, one at a time. The participant is then instructed to say the shape's name and color as they light up. They can then select the shape and color on the screen and will do this five times before moving on. In the next part of the exercise, the participants are instructed to touch things around them and feel the textures. Additional textures will be built into the sculpture for this purpose. They will be asked to think about how the textures feel by selecting buttons representing these textures. When this part of the exercise is complete, participants will be guided to listen to sounds. This task could be achieved on the laptop by playing a recording of the natural sounds of a rainforest or something similar. On this screen, they will be guided to listen for the sound of water, bird noises, frogs, etc. In the next part of the experience, they will be asked to try to smell something, one at a time; servos will operate a sliding mechanism to open scent boxes built into the lower part of the sculpture. Here, they will be able to identify two different scents. After that, it will instruct them to focus on their sense of taste and may offer a candy through a slot below the touchscreen. Alternatively, they could be asked to focus on anything they might be tasting in general. A heart-rate sensor might be attached to the sculpture for people wanting to get 'before and after' readings.

Ideally, I would like the sculpture to be large enough to encapsulate people a little, enough to give a sense of safety. It will have a box built into it to contain the touchscreen and the components but will be primarily made of wire mesh panels in colorful shapes. Initially, I was thinking of a large abstract, brightly colored sculpture, but I'm considering a floral theme with leaves that might suit it better. The screen and components might sit in the center of a flower.