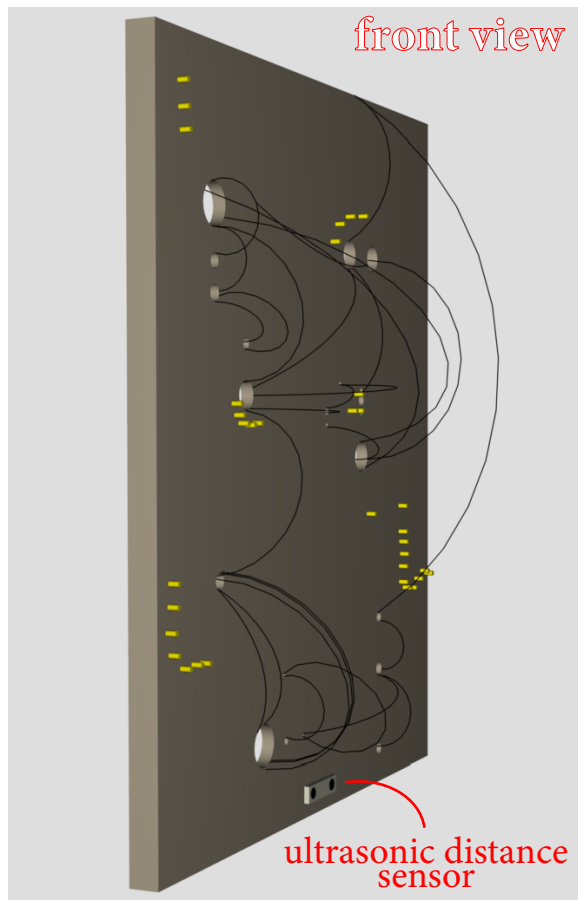


# wednesday questions

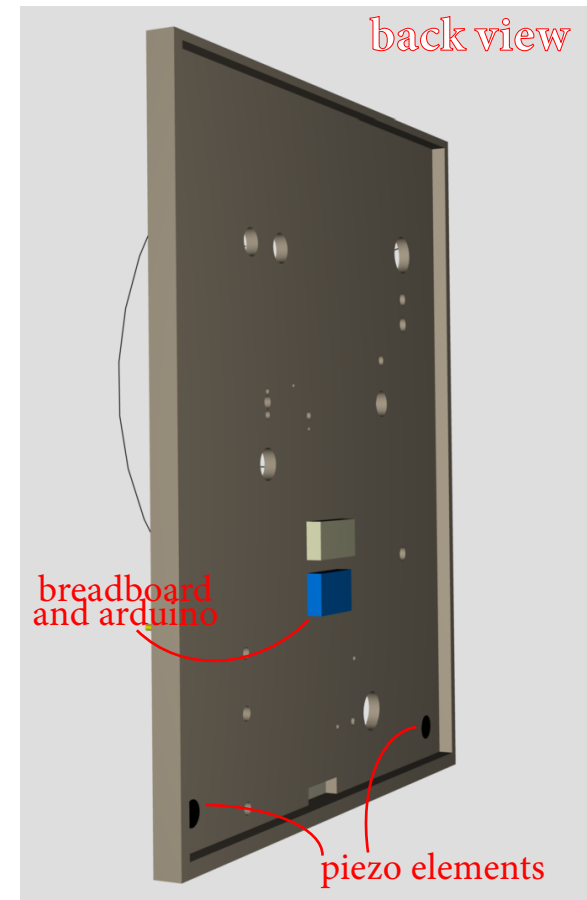
holly adams

"wednesday questions" is a reactive wall hanging that utilizes an ultrasonic distance sensor, LEDs, and piezo buzzers to respond to the viewers presence in an abstract manner. Inspired by the mechanical assemblages of Carolee Schneeman and the aesthetics of poetic minimalism seen in the aliens in the 1999 movie Zenon, this work will be composed visually of a wooden panel, perhaps painted, wires emerging from the wood, and the visible sections of the LEDs. Much of my energy will be focused carefully planning and executing the physical craft within this piece, in an effort to keep anything from distracting the viewer or invoking too much of a "DIY" aesthetic.



While I do not yet have a final composition created, I know that I probably want the piece to be composed of yellow tones, and will use yellow and white LEDs. The initial idea for the piece additionally utilizes the idea of bare wire in an electronic work to inspire a vague trepidation in the viewer contrasting the positive aesthetics of the work, and I believe it could be an interesting idea to have the wires so carefully placed within a non-tactile work that the exposed wire will not be an issue.

I plan to use a series of integrated circuits and gates in order to control the sequencing of LEDs and create unique systems and patterns of responses based on the changes detected by the ultrasonic sensor. This will allow the piece to have a sense of physical spontaneity within the electronics itself, with very little code. The focus of this work will be the physical craft itself, and less about the software side. I am excited to begin work with the piezo buzzers, and to make a work that prioritizes aesthetic value and visual abstraction over concept.



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## MATERIALS

### Physical:

- Wood backing and pieces to hold off wall
- Nails and/or wood glue and clamps
- Drill and drill bits
- Yellow paint and sandpaper to finish the wood
- White flag and other assemblage elements

### Software:

- Arduino IDE

### Hardware:

- Large breadboard
- Arduino Uno
- Piezo elements (x4 at various sizes)
- Yellow and white LEDs
- Integrated circuits (gates and counters)
- Bare and yellow coated wire
- Ultrasonic distance sensor

This work will be my first use of piezo buzzers and a distance sensor to trigger reactivity, and represents an opportunity for me to create at a more abstracted visual level than usual. I have used integrated circuits to trigger LED sequences in the past, and am excited to utilize them again in order to keep my software clear and concise.

## CALENDAR

04/05: **Proposal due**

04/05-04/11:

- Learn piezo elements and ultrasonic sensor
- Determine patterns and degrees of response
- Begin working with LED series and ICs

04/12-04/18:

- Create wood object, drill holes for wiring, secure breadboard and arduino
- Begin aesthetic side, add minimal objects and detailing
- Create wire details and coiled patterns

04/19-04/25:

- Continue building physical object, checking/testing wiring and installing LEDs throughout the process
- Install sensors and actuators on the physical work, begin finalizing software

04/26: **Tech demo**

04/26-05/02:

- Finalize physical product
- User test, finalize reactivity, responses, software

05/03: **Project previews**

05/03-05/07:

- Determine final installation setup
- Create documentation

05/08: **Final show**