# ShiverBot

by Guobotics
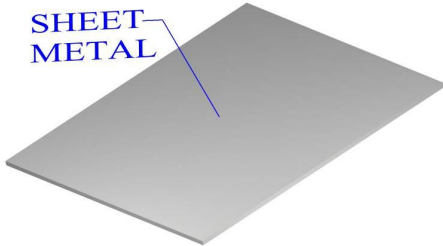(Adella Guo, Rachel Nakamura, Alan Qiu)

# Why ShiverBot?

- Shivering robot vs. social media robot
   a. Physical interaction vs. digital presence/identity
- Lack of literature on robots eliciting empathy through biological functions
- Research question:
   a. How long will people stay to "warm" a robot if we imbue the robot with the human characteristic of shivering (versus not shivering)?
- Independent Variable:
   a. Three types of voices:
      - Robot (voiceover)
      - Female (text-to-speech)
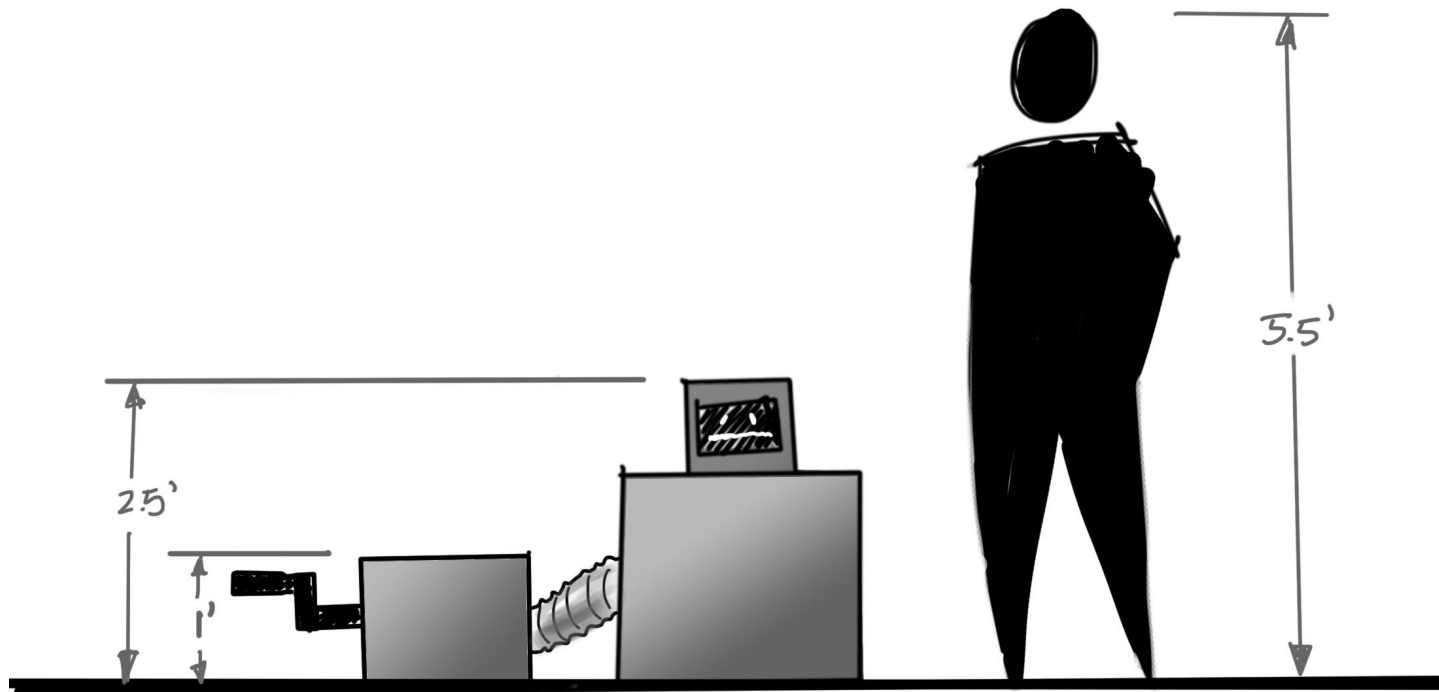      - Male (text - to - speech)

# Appearance

Acrylic + sheet metal

SIZE COMPARISON

5.5'

2.5'

1'

# Appearance

- **Facial Expression**
  - How do we portray cold? Shivering?
  - How do we elicit empathy
  - Talking
  - In need of help, helpless
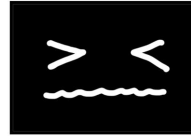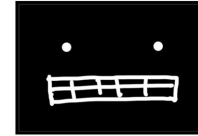
FACES

INSPIRATION

PULLS @ GUT

IN PAIN

STEREOTYPICAL

NOT TALKING

TALKING

FACE #2: MORE SUGGESTIVE OF EMOTION / ELICITS MORE EMPATHY

# Build

- iPad (face)
- Smartphone (audio & communication)
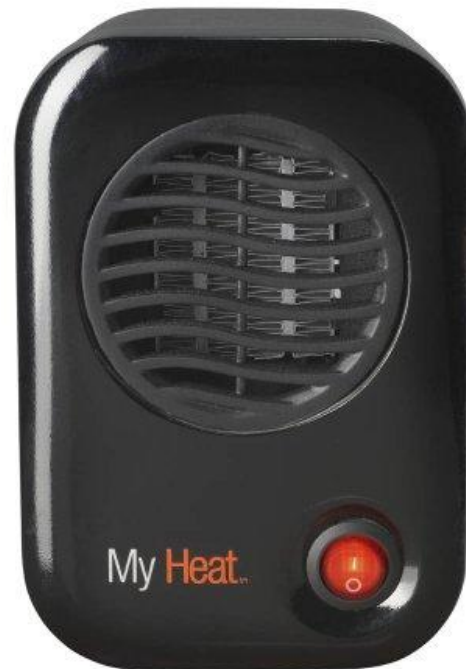- *2 Speakers* (bluetooth or wired)

# Build (part 2)

- Crank ($30)
- Aluminum heat duct
- Metal Chain
- Hook
- Lock

# Build (part 3)

- Servo motors (shivering)
- *Heater*

# Operation

Wizard of Oz

- Face (iPad)
- Smartphones
- Voice Changer (Garageband)
- Text-to-Speech
- Gear/generator noise

# Dialogue

**Contact Initiation**

"Sorry! Excuse me?"
*If user gets closer:*
"I wouldn't ask unless I really needed the help, but can you please turn that crank?"

**Backstory**

"Really sorry, my owner has been gone for a while, he said he'd be back soon."
"Is it chilly out here or is it just me?"

**Possible User Responses:**

- "Is that good?"            -Sorry yes
- "What is this for?"          - If you could just keep me warmer a little longer?
- "I'm sorry I have to go"      - Really? [Contact Termination]
- "Do I just keep cranking?"    - I'm sorry just a little bit longer please.

# Dialogue

**Elicit empathy**

- **How has your day been?** Has anything exciting happened? Why why not?
- Are you looking forward to anything fun? If you can be anywhere right now where would you be?
- What do you like to do when you're not working?
- What type of music are you into?
- Have you read any good books recently?
- Are you a cat person or a dog person?
- Coffee or tea?
- Do you cook?

**Contact Termination**

"Thank you so much! Sorry for troubling you! What's your name, by the way?

*User says name*

"Well, it was really nice to meet you, [Name]. Take care of yourself, okay?"

# Situating the Robot

- Outside of Purnell

(entrance of Pausch Bridge)

- Intersection of many fields
  - Greater diversity of users
  - Larger number of users