

# Technado Sensory Overload Detector Device

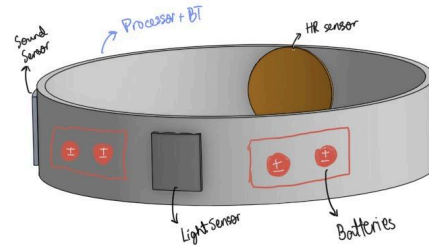
Varsha Alladi, Anshu Adiga, Harshil Hari, Jackson Whitely, Hasini Gujjari

---

Writers: Jackson 04/25/2025

Peer Editors: Anshu 4/30/25

## Design #1: Bracelet



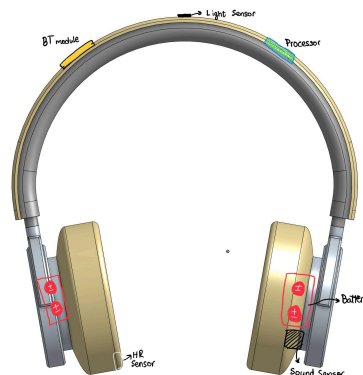
The bracelet design is worn on a user's wrist and is the smallest, least noticeable of all three of our designs. This design has both sound and light sensors in addition to the built-in Galvanic skin response and heart rate sensors. All of these different sensors serve the purpose of collecting data that can be fed into an algorithm that will output whether or not the user is at risk of having a sensory overload or already undergoing sensory overload. This algorithm will also be customizable for the user's specific threshold for each sensory input. because of the fact that users can input their sensory overload thresholds into the device. The device will connect via Bluetooth or Wi-Fi to a user's or caretaker's device in order to measure the user's sensory environment. Additionally, it will notify users with recommendations and warnings.

---

Writers: Jackson, Harshil 04/25/2025

Peer Editors: Anshu 4/30/25

## Design #2: Headphones



Our headphones design involved having all of our sensors built into a pair of headphones that a user could wear around their neck. This design is much more noticeable than the smaller

# Technado Sensory Overload Detector Device

Varsha Alladi, Anshu Adiga, Harshil Hari, Jackson Whitely, Hasini Gujjari

---

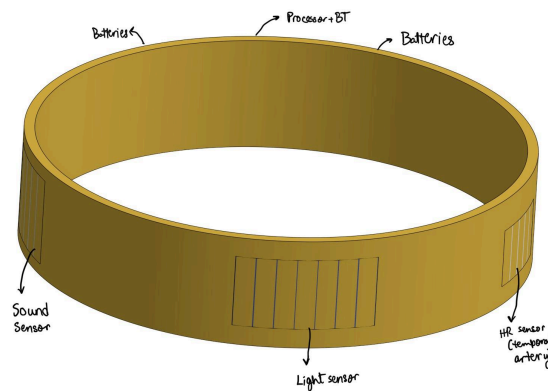
bracelet design and may not be liked as much by clients for this reason. It also requires clients to wear it in a specific way to sense heart rate and sweat response. One positive of this design is the fact that the sound sensor will give more accurate readings as it would be right next to the user's ear, where they would normally sense auditory overload. Additionally, there would be more space for the other sensors and battery. The light sensor is located on the top of the headphones. Therefore, if the headphones are worn correctly, the device's light data is very accurate because there would be minimal conditions when the sensor is blocked by something.

---

Writers: Jackson, Harshil 04/25/2025

Peer Editors: Anshu 4/30/25

## Design #3: Headband



The headband design is wrapped around the user's head and has both light and sound sensors attached to the outside of the fabric. The light sensor is positioned on the user's forehead and the sound sensor is on the side, near the ear, in order to mimic what the user would actually hear. Positioning this device in the wrong way could also stop functionality. This design is by far the most noticeable of our three designs and could potentially draw a lot of unwanted attention to our users. Another negative is that this design could be uncomfortable for users due to how it is placed directly on a users forehead. However, one positive aspect of the design is that there is more space for the battery and sensors. The light detection with this design will also be very accurate as it is on the users forehead, where they would intake visual stimuli.