**Hardware Design:** [**https://learn.adafruit.com/assets/93504**](https://learn.adafruit.com/assets/93504)

**A picture containing object, clock

Description automatically generated**

**Hardware Specifications:**

In order for our system to record sufficiently accurate temperature measurements of our users, a range finder will be used to determine if the user is standing at an ideal distance from the temperature sensor. The range finder used for this project is the Adafruit VL53L0X time of flight distance ranging sensor. We decided that the VL53L0X time of flight sensor is the appropriate sensor for our project as it precisely measures the time the light takes to travel to the nearest object and reflect back to the sensor (Time-of-Flight), instead of using a sensor that would estimate the distance by measuring the amount of light reflected back from the object (which is significantly influenced by color and surface).

The VL53L0X time of flight sensor measures absolute distances up to 2m which would be an ideal distance to measure the user’s body temperature accurately. The VL53L0X can be powered from the Raspberry Pi’s 3.3V power and features and I2C serial interface which is suitable for communication with a Raspberry Pi.