Week (12-13) Oct 31-Nov14:

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Goals of the week:

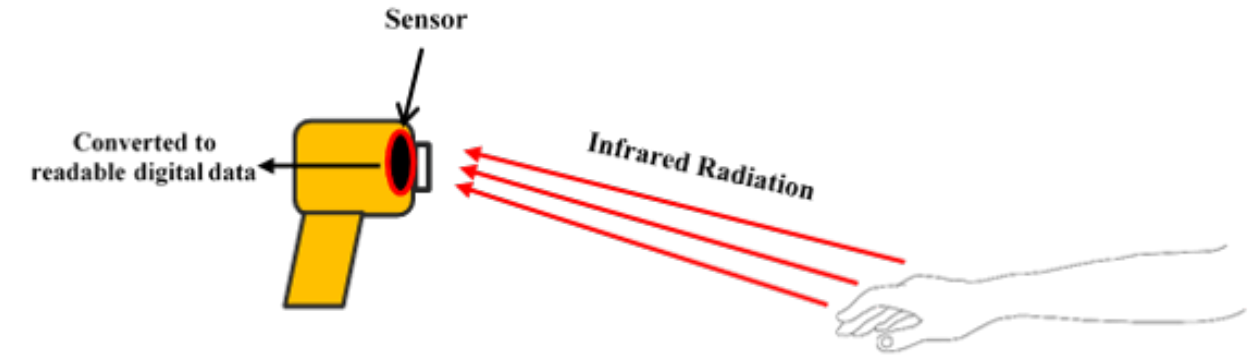
-Continue learning about Raspberry Pi applications.
-Connect thermal Camera on Raspberry Pi and record some data -Interview people and tell them about our project

General Notes:

Since we will be designing a non-contact device that will be used to check human temperatures it is important to understand how the actual infrared/contactless thermometer works and how field of view for Infrared temperature sensors is determined.

The field of view of the sensor is determined by the angle in which the sensor is sensitive to thermal radiation. This means that the sensor will detect all object in failed of view and it will return the average of all objects in field of view. To measure a certain object the user should take the FOV into account to determine the distance between the sensor and the object becauseit'simportantthatthemeasuredobjectcompletelyfilesthefailedofview. IR thermometers use a lens to focus the infrared energy from an object onto a sensor that measures it, this sensor absorbs infrared radiation and converts it to an electrical signal, with more intense radiation creating a stronger signal. The IR thermometer processes this signal in order to deliver a temperature readout.

During these two weeks we had to interview people and take their feedback regarding our project for this interview I interviewed an electrical engineer who has been working with electrical devices for the past five years. At the beginning of our interview, I introduce to him our project and the design. After that I started our conversation by asking my interviewee about what is important to him in a temperature taking device. His answer was about how important the accuracy in a temperature taking device because the accuracy and precision in kind of devices such as a thermometer are the main factors which affect such measurement. Second question I asked was what the major or initial concerns he might has with a temperature taking device. My interviewee said that his initial concerns other than the accuracy will be about how fast a thermometer can read a temperature of body and how fast it will inform the user about their readings. The third question was if my interviewee would purchase this product what his expectations are. He said that he would expect a device that is easy to use, measures temperature



and displays a reading rapidly and provides ability to retake a temperature quickly. In the conclusion of our conversation, I asked him how many times he had his temperature taken by a contactless temperature device and the answer was that he has experienced using a non-contact Infrared Thermometers so many times and he is so happy with this kind of devices.

Results and Conclusions:

Still need to work more on the connection between the thermal camera and the raspberry Pi