**Week of 9/10**

Considered a design problem and a realistic solution for the ‘thermal doorway

Monitoring system Design proposal

**Problem**: Getting an accurate temperature measurement of a person in motion.

The above problem introduces a difficult problem, as a person in motion may be missed

by a single fixed infrared temperature measurement device if the person in motion’s

forehead and sensor are not perfectly lined up.

**Solution:** Use thermal imaging. Thermal Imaging essentially uses a planar array of thermal

Sensors to measure a temperature over a given area and refreshes them rapidly to develop

thermal image for ‘frames’ of motion. For example, the Adafruit MLX90640 uses a

24x32 (768 total) array of sensors, refreshed at 16 hertz to get a moving heat image.

In one second this sensor will take 12,288 temperature measurements. It seems conceivable

That buried in this data a person could be detected and temperature measured quickly to assess

A person a passing by, given a few assumptions. First, only one person passes by the sensor at a

time and second, the person is the warmest object in frame at all times.