JACOB BOONE and WEIDONG LIAO, Dept of Computer Science, Mathematics and Engineering, College of STEM, Shepherd University, Shepherdstown, WV, 25443. A Face Mask and Body Temperature Detection System using Raspberry Pi.

In this presentation, we describe our face mask and body temperature detection system implemented using Raspberry Pi. This project aimed to develop a portable face mask detection and temperature reading device that detected if a person was wearing a face mask and their temperature was within a specific range.

An MLX90614 infrared (IR) sensor was interfaced with a raspberry pi and used to detect an object's temperature within its field of view. The operating distance of this specific IR sensor is 2cm-5cm. The detection software program utilizes the Python library smbus2 and the locally stored folder mlx90614 to read the object temperature from the IR sensor, convert the Celsius temperature to Fahrenheit. If the detected temperature is within the preset range and the MobileNetV2 model sees that the person is wearing a mask, then a green box is displayed around the person's head. If the detected temperature is out of the range and the model predicts the person is not wearing a mask, then there is a red box outlining the person's face.

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