1 Physical

The infrared sensor array works by the following principles: A phototransistor changes its resistance based on the amount of IR light it detects. The change in resistance manifests as a voltage between the corresponging "D" pin and ground. A togglable IR led can increase the amount of IR light present in the area. By pulling the IR pin high the led will be on.

2 Programming

To utilize the IR sensor the program should use an analog to digital converter (ADC) to measure each voltage on each "D" pin. By analyzing the values of these, the program can collect information on the IR reflectance of the materials the sensor is facing.