

Problem statement :

Develop an IoT Drive Warning System that enhances driver safety by providing real-time alerts for potential collisions, lane departure, driver fatigue, and adverse road conditions.

KEY COMPONENTS:



Collision Detection
Sensors



Lane Departure
Warning

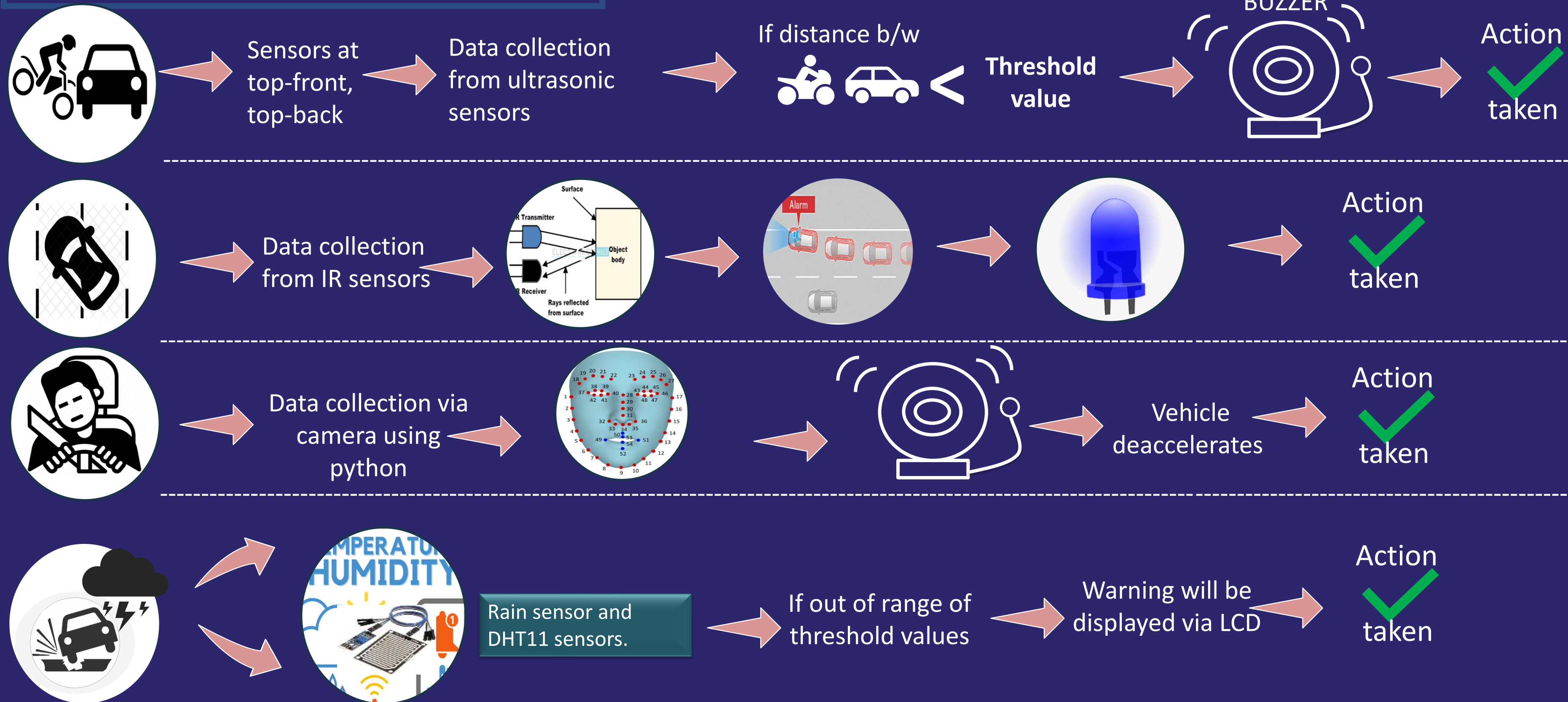


Driver Fatigue
Monitoring



Weather
Condition Alerts

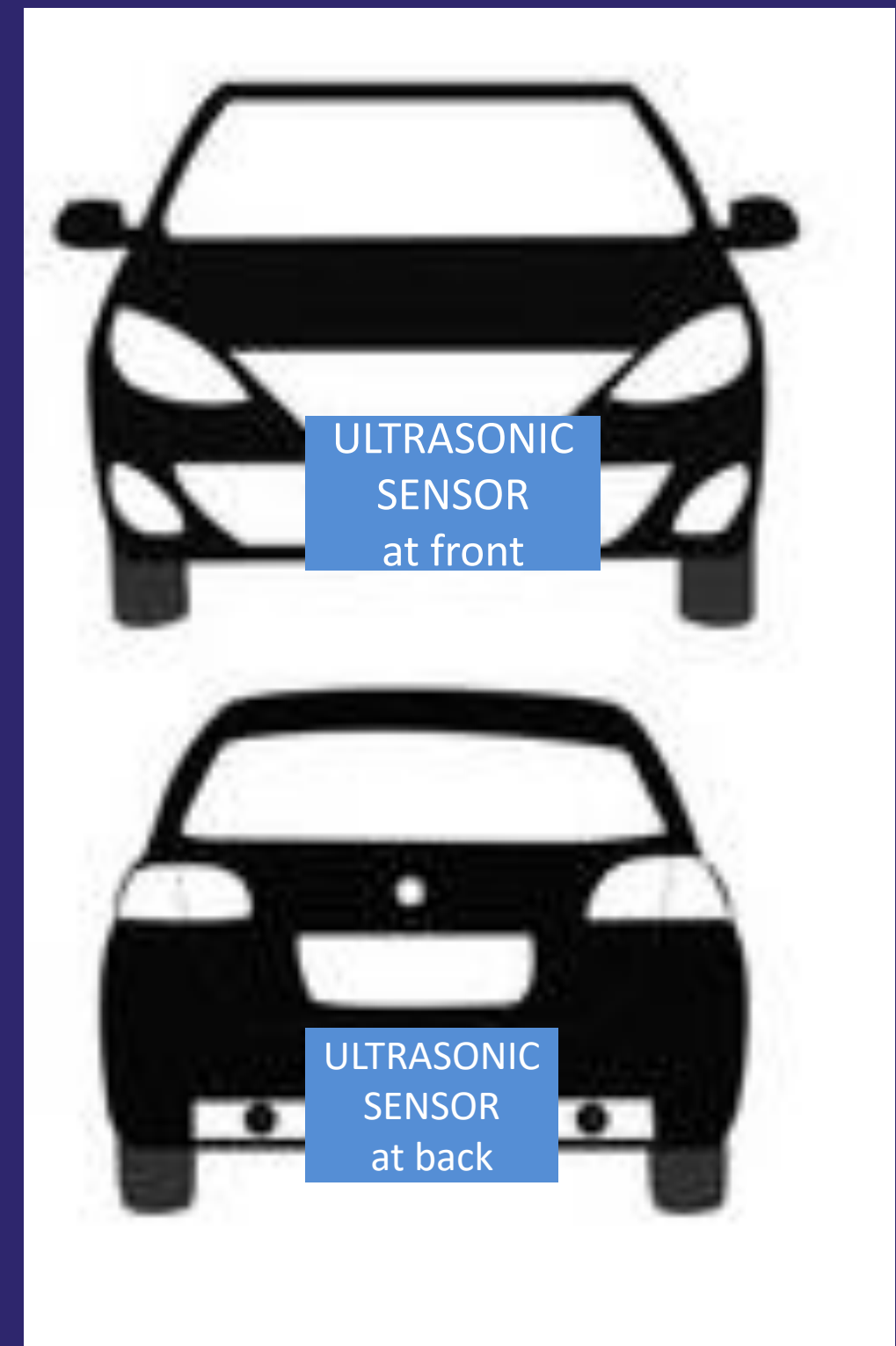
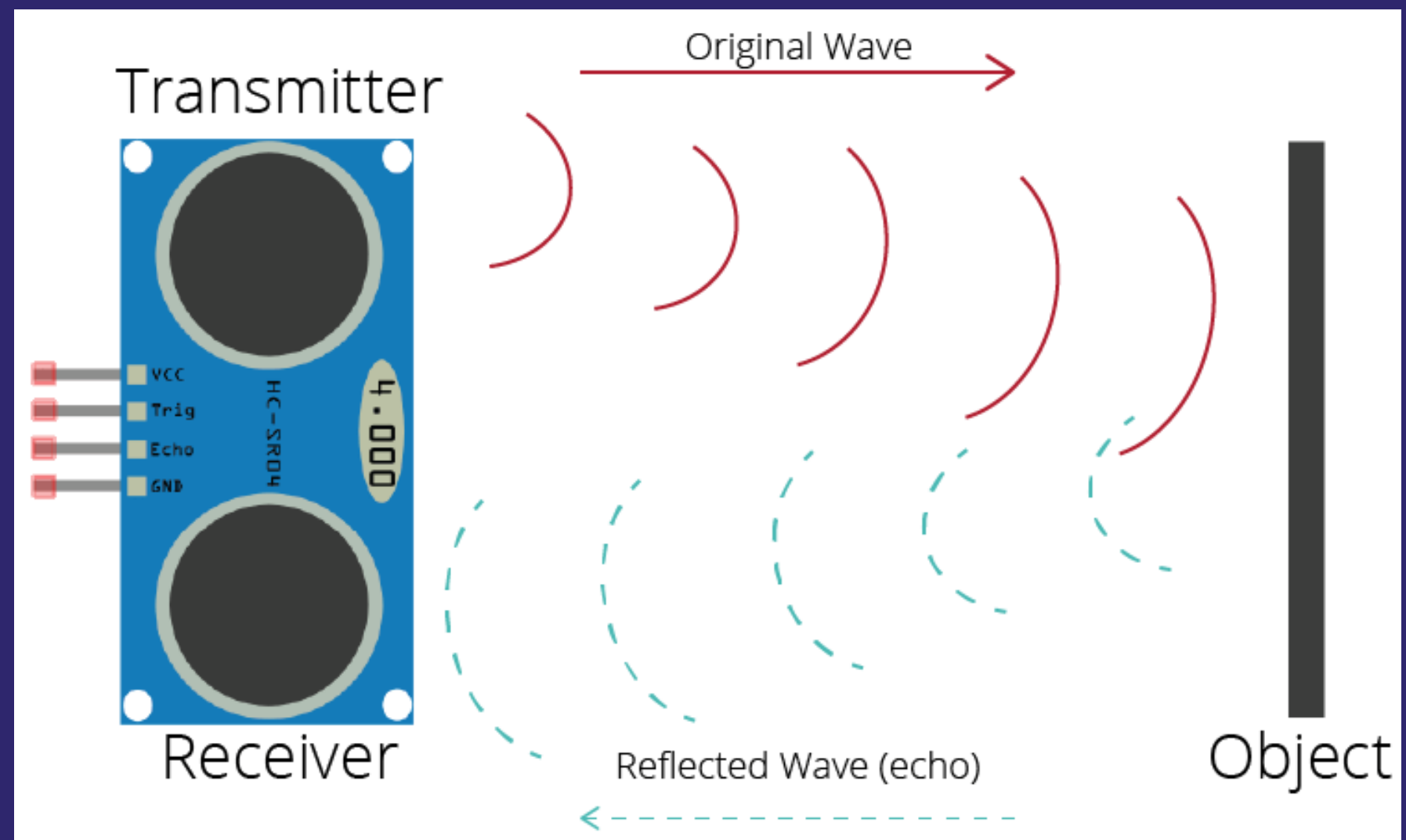
Idea/Approach:





Collision Detection:

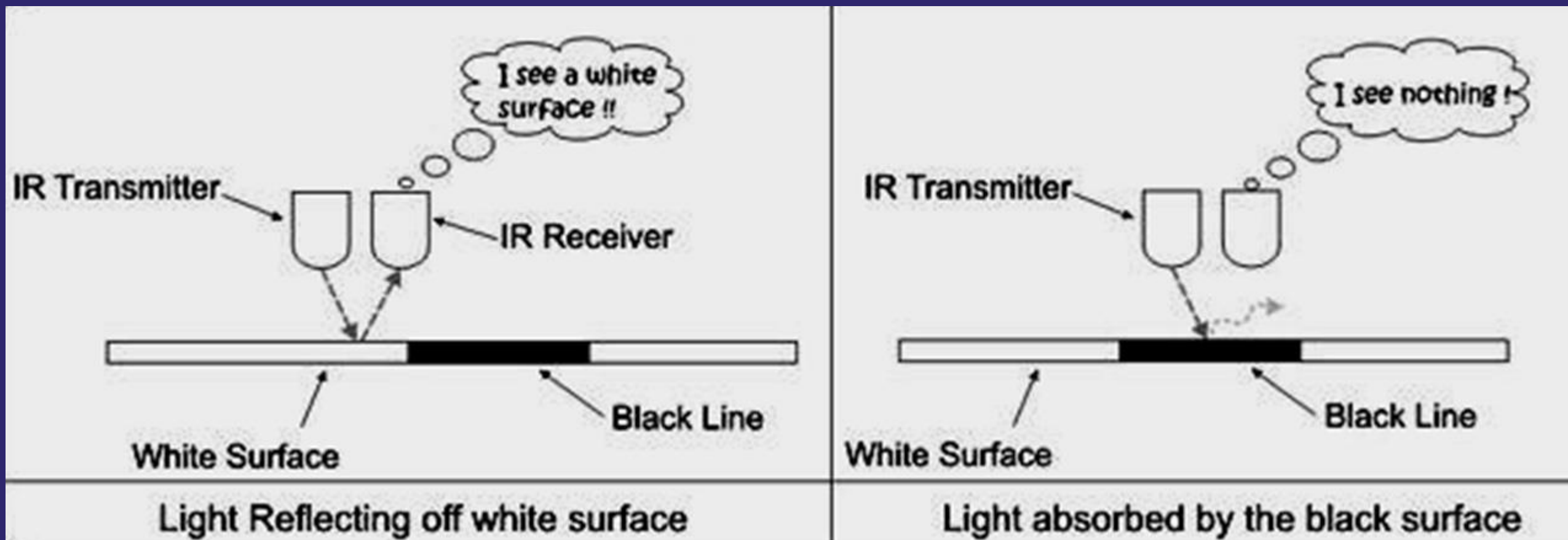
Working of the sensor:





Lane Departure Warning:

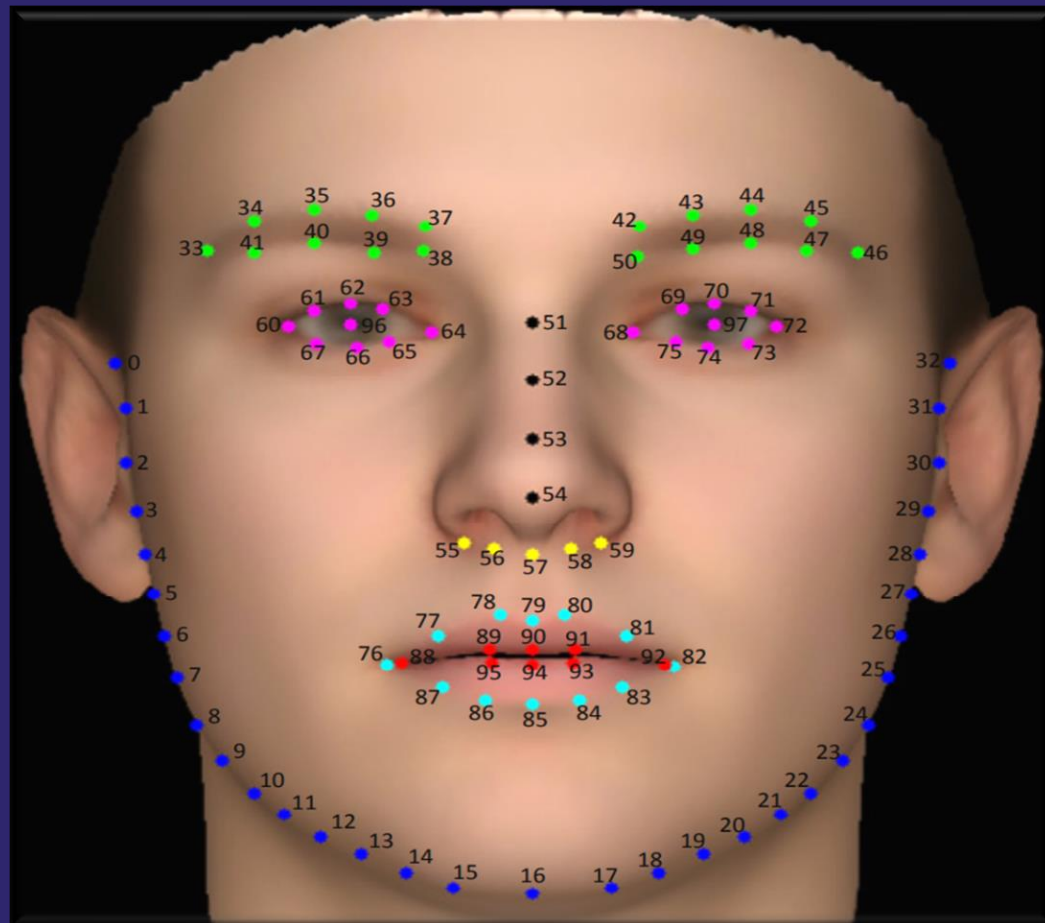
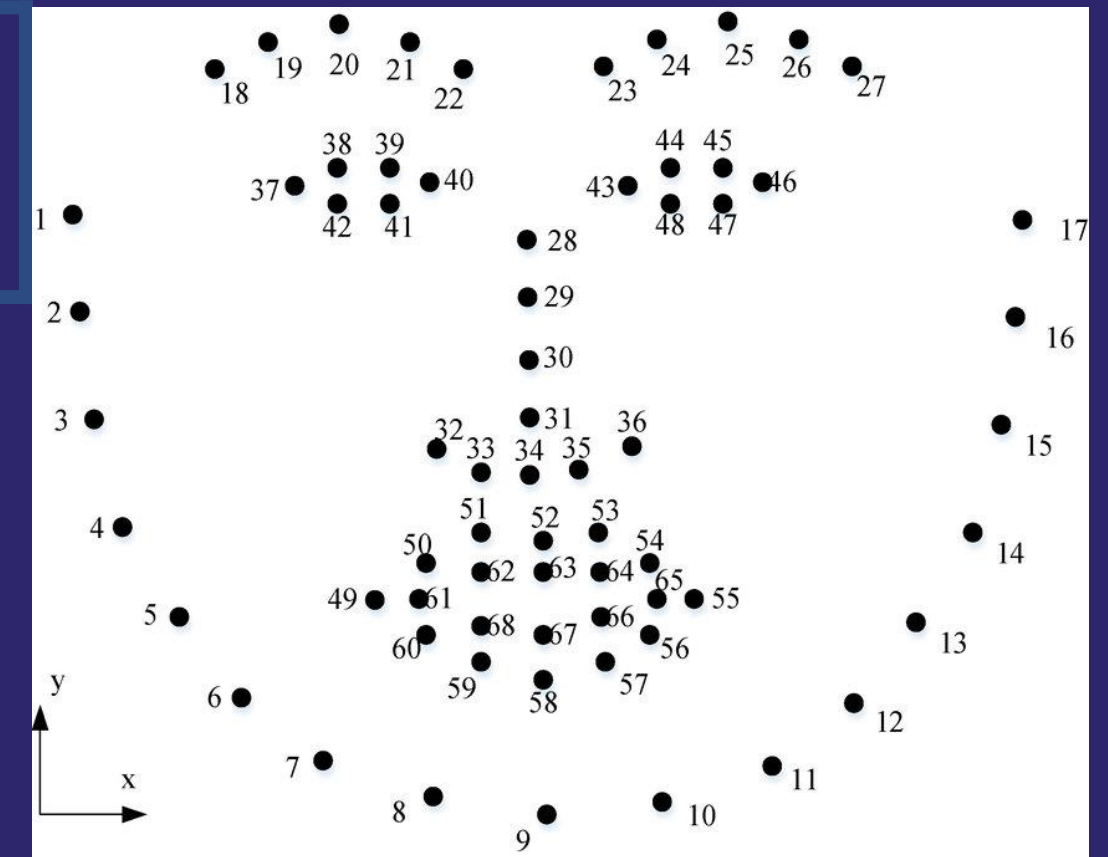
Working of the sensor:





Driver fatigue detection:

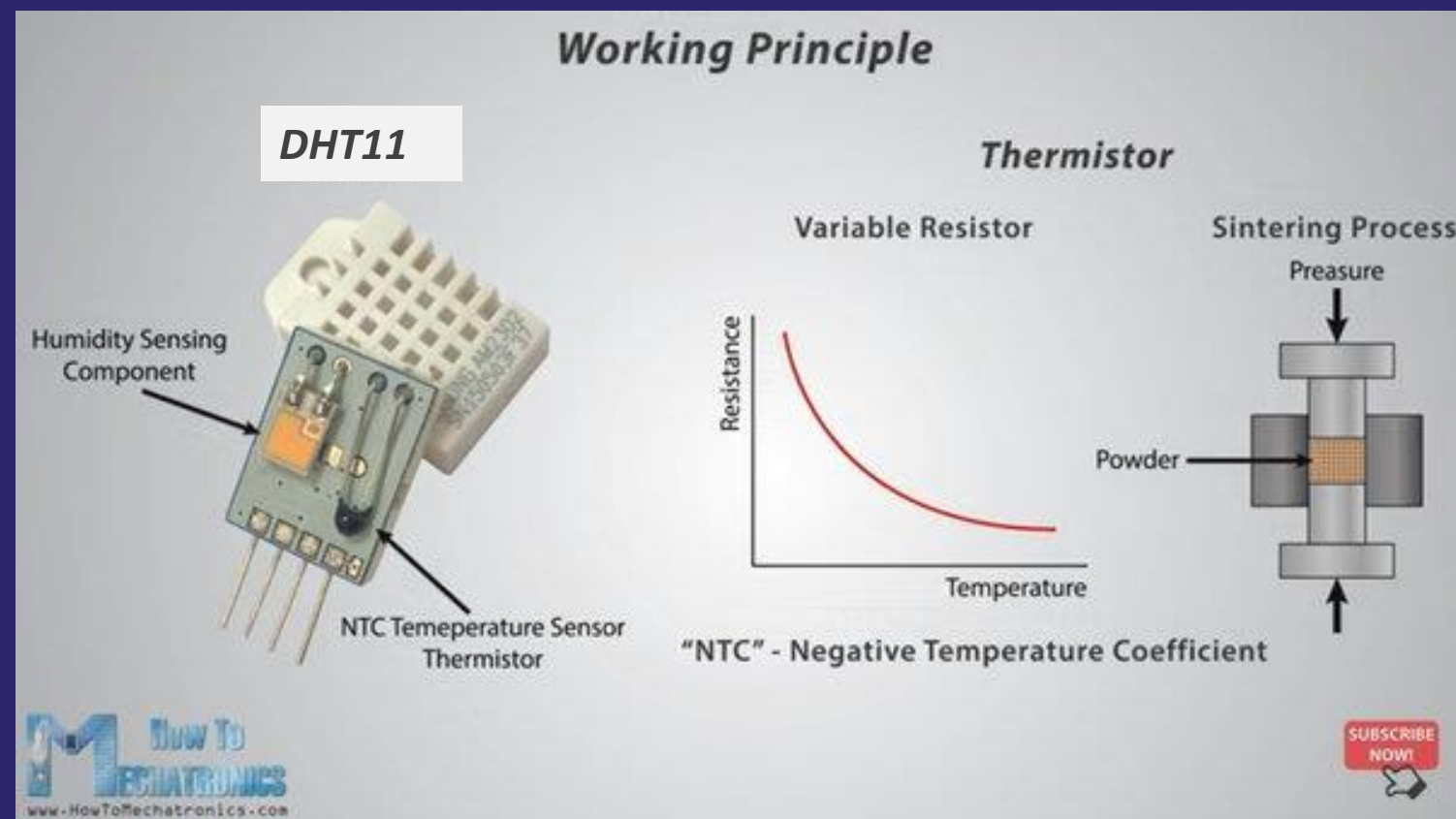
- Here we have used 68 point face landmark.
- It detects the sleeping, active, drowsy or fatigue conditions using python and few libraries such as dlib, opencv .





Weather conditions:

DHT sensor



Rain sensor

