OBJECTIVES

Team ID	PNT2022TMID54322
Project Name	Signs with Smart Connectivity for Better Road Safety

OBJECTIVES

1. To replace the static signboards, smart connected sign boards are used.
2. These smart connected sign boards get the speed limitations from a web app using weather API and update automatically.
3. Based on the weather changes the speed may increase or decrease.
4. Based on the traffic and fatal situations the diversion signs are displayed.
5. Guide (Schools), Warning and Service (Hospitals, Restaurant) signs are also displayed accordingly.
6. Different modes of operations can be selected with the help of buttons.

PROPOSED SOLUTION

Weather and temperature details are obtained from the OpenWeatherMap API. With this information, the speed limit will be automatically updated depending on the weather conditions. Furthermore, details regarding accidents and traffic jams encountered on specific roads are collected. Based on this, traffic is redirected followed by a path change on the map and traffic is cleared. So, in the road signal nodes will be placed to make it generic; where each button will function like changing predefined, warning signs and separate signs will be present for school and hospital areas. By activating this button, through the web application or through physical buttons, the sign of the board can be changed accordingly, and speed limit will also be set according to the area. In addition, pedestrians have the option to change traffic signs if they want to cross the street. If a pedestrian presses a button on a pole at the end of the street, the traffic will be analysed immediately. Therefore, traffic signs will be changed. This reduces the frequent change of traffic signs even when pedestrians are not present.