Project Objectives

Team ID	PNT2022TMID17080
Project Name	Project - Signs with smart connectivity for better road safety

Signs with smart connectivity for better road safety

Skills Required:
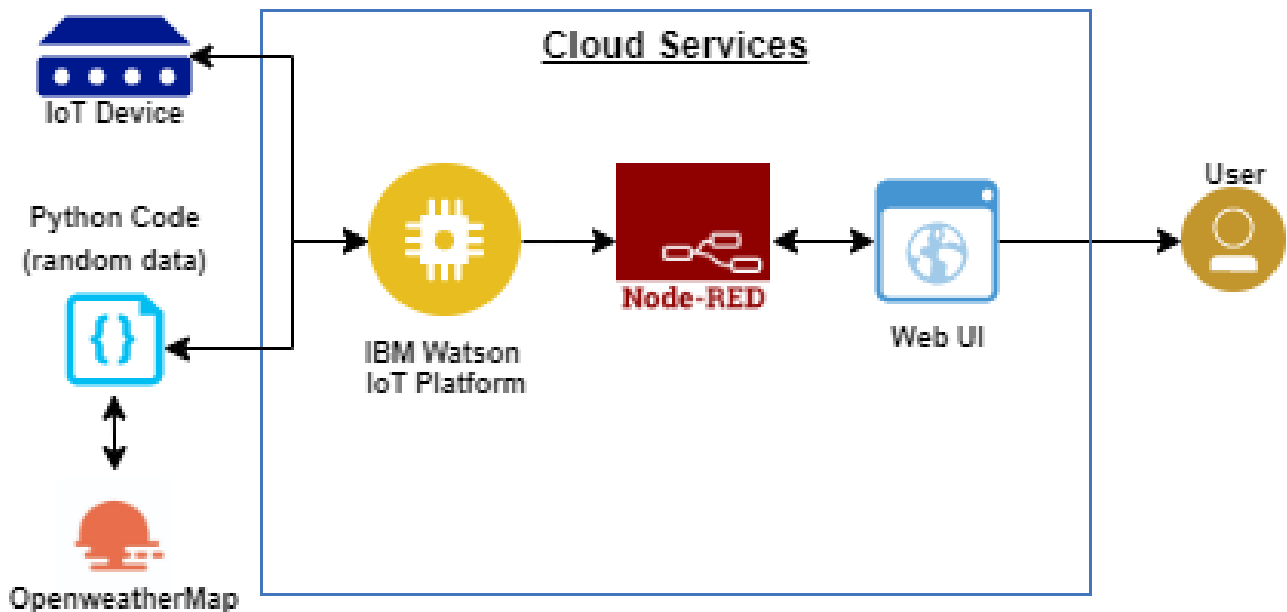
Project Description:

- ❑ Smart connected signs are used in place of static signs.
- ❑ These intelligently connected signs receive speed limits from a web app using the Weather API and update automatically.
- ❑ Speed may increase or decrease due to weather changes.
- ❑ Depending on traffic conditions and dangerous situations, diversion signs will be displayed.
- ❑ Signs (schools), warning and service signs (hospitals, restaurants) are also displayed accordingly.
- ❑ Various operating modes can be selected with buttons.

Project Objective:

The purpose of connected vehicle technology is to solve some of the huge issues in mobility, safety, and the environment. One of the main objectives of this project is the application of the Intelligent Transport System (ITS) for safety.

An industrial and research project called "safety application" aims to develop the automobile's real potential. In this project, we concentrate on networked sign boards that receive speed restrictions from a web app using a weather API and automatically update.

Depending on the weather, the speed may significantly affect, and depending on traffic and dangerous situations, divert signs are also displayed, and schools, hospitals, and restaurant locations signs are displayed appropriately.

The speed limits and road indicators in existing systems are static. Although, under circumstances, the signs may be updated. If the road signs are digitalized, we may pay attention to circumstances where there are deviations caused by traffic congestion or accidents and update the signs accordingly. This proposal suggests a system that utilizes digital sign boards with constantly changing signs.

The vehicle speed would be lowered if it were raining because slippery roads would result. There is a web application that allows you to enter information about road deviations, accident-prone regions, and informational sign boards.

This information is obtained and displayed on the sign boards effectively. It is apparent that intelligent road signs may actually increase our driving experience. They make it possible for drivers to access the information they required on the road more effectively and in real time

. These warning indicators can raise people's awareness of potential outcomes that they may not see. These might enhance the effectiveness of automated driving. Don't underrate the significance of implementing this technology. Smart roadside indicators may improve cost effectiveness, reducing the load on governments and taxpayers.

They make driving easier for both conventional automobiles and autonomous ones. Compared to the conventional route signs we presently use, the labels may be easier for users to determine.

Most importantly, it will ultimately lead to a safer road network for all. Intelligent road signs are not just a futuristic goal. British he two companies worked together to create these signs for use on British roads.

Signs are technologically advanced with graphics and text clearly visible to the driver. The messages are easy to understand and keep drivers updated on changing track conditions. This new signage not only improves users' road experience, but also requires less maintenance than traditional indicators.

New signs require less material and less wiring, saving time, maintenance and costs. Increased traffic uses municipal road infrastructure and has serious implications for traffic efficiency and road user safety.

46% of fatalities involve vulnerable road users (VRUs) such as pedestrians and cyclists. Information exchange between road users is an important component to improve this situation as it increases their awareness. Presented a system that informs drivers about speed limits in specific areas and slows vehicles in sensitive public zones without driver intervention. The system is automatically controlled via a wireless local area network.