



Smart Honking System for Smart Cities Using IOT

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Abstract: This project has an aim to control the horn volume in cities and also in restricted area as such schools, parks, hospitals, old age homes, college, government offices and in speed limited areas etc. Some peoples are driving vehicles in a high speed and create noise of horn of vehicle. So the police are not able to monitor all those things. Driver does control the speed of vehicle at places. This paper provides a way for how to control the speed of vehicle and control the noise of horn without harming others. This project has an aim to control noise of horn automatically. The speed of any vehicles will be detected using accelerometer if the speed of vehicle is exceed in honking zone then the buzzer can buzz and get alert to driver about . cities and also in restricted area as such schools, parks, hospitals, old age homes, college, government offices and in speed limited areas etc. Nowadays in a fast moving world all the peoples are not have self-control. Controls are taken automatically by the use of electronic system. In this project we use GPS for indicating the nearby honking zone. Speed is measured by the help of accelerometer in the vehicle. The controller compares the speed. If it exceeds the limited speed the pizzobuzzer buzz and alerts the driver and controls taken automatically by driver and when vehicle is near at honking zone the switch can automatically decrease the volume of horn if it on. In this way our smart honking zone for smart cities project will be perform.

Keywords: Speed control, inter-vehicular communication, honking, Arduino, switch, GPS, Pizzobuzzer, noise control.

I. INTRODUCTION

At present accidents are mostly occurs due to rash driving and over speed in road, Road accidents continue to rise due to reckless driving and speeding, exacerbated by the increasing number of vehicles on the road. Despite governmental efforts and the development of high-cost laser-based control systems by manufacturers, there remains a need for a more accessible solution. This research proposes a system that monitors vehicle speed using a separate module or ultrasonic sensor, enabling automatic speed control when the driver fails to adhere to set limits. However, manual override capabilities are retained. Additionally, the study addresses the issue of noise pollution caused by unnecessary honking in restricted areas. A technical solution is proposed to determine proximity between vehicles and prevent unwarranted honking. The impact of speed on noise pollution and its adverse effects on human health, as outlined by the World Health Organization (WHO), are discussed. The research aims to provide insights into mitigating these issues for safer roads and improved community well-being. Moreover, the study highlights the environmental consequences of the increasing number of vehicles, emphasizing the need for sustainable transportation solutions. The proposed system not only enhances road safety but also contributes to reducing air pollution caused by vehicular emissions. By integrating technology to control honking in designated zones, the research aims to minimize disturbance to residents and address the broader societal impact of traffic noise. The multifaceted approach presented in this paper seeks to create a comprehensive framework for fostering a safer, healthier, and more sustainable urban transportation environment.

II. LITERATURE SURVEY

Many researchers have contributed to this field. Various combinations of existing technologies have been used

1. Each year, there are thousands of highway deaths and decade of thousands of serious injuries due to” Run-Off-Road” accidents. Everything from easy driver inattentiveness, to fatigue, unfeelingness, to drunk driving, is accountable. Simple sensors can be fitted inside vehicles implant with various features like, automatic crash notification, vehicle security, speed control which can give motivation to an efficient road safety system. The features that are proposed during this work are: Automatic collision notification that gives alerting to the victim’s relative, Red light control makes sure vehicle doesn’t break signal, speed control alters speed indistinct zones, Horn control prohibit honking horn prevented zone, Vehicle security issued to prevent theft.[1]

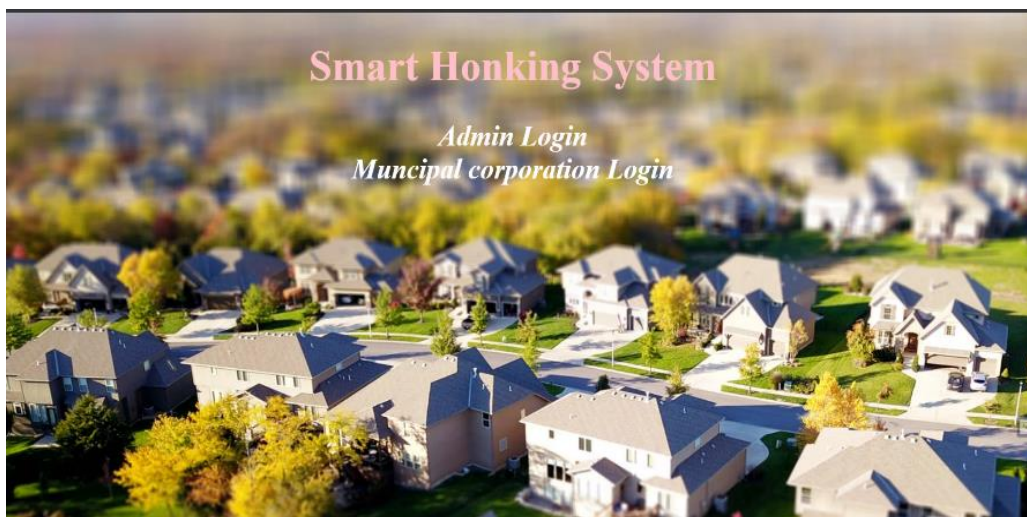


2. This paper describes an ultrasonic sensor that's ready to measure the distance from the bottom of selected points of an automobile. The sensor is predicated on the measurement of the time of flight of an ultrasonic pulse, which is reflected by the bottom. A constrained optimization technique is used to get reflected pulses that are easily detectable by means of a threshold comparator. Such a way, which takes the frequency response of the ultrasonic transducers under consideration, allows a sub-wavelength detection to be obtained. The sensor consists of only low cost components, thus being apt for first car equipment in many cases, and is in a position to self-adapt to different conditions so as to offer the simplest results.[2]

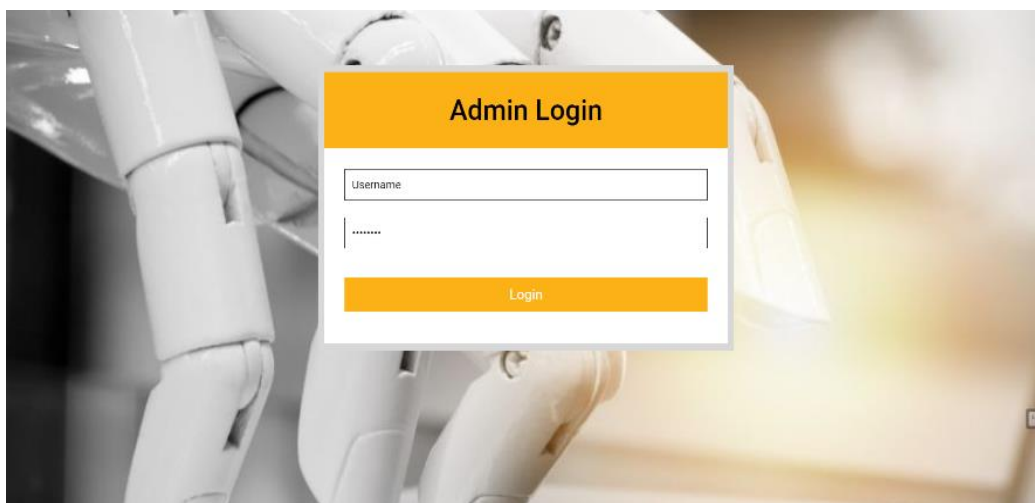
3. Due to the fast increasing vehicle population in the recent years has resulted in considerable increase in the traffic on roads, causing forbidding noise pollution and also making the task of vehicle monitoring cumbersome for the civil force. This paper suggest an idea to design an on board equipment SHARP which apply soundless horn, a mechanism for vehicles to reduce the traffic noise and a remote watcher to aid the civil force in observing the vehicles remotely with enhanced hit ratio of black listed vehicles. The proposed idea integrates the technologies of image processing and inters vehicular communication for its execution. The designed on board equipment is targeted for four wheelers and a typical SHARP system is formed of –a camera, processor, DSRC transceiver, GPS device and an LCD display.[3]

III. PROPOSED SYSTEM

SMART HONKING ZONE FOR SMART CITIES SYSTEM THE SYSTEM ARCHITECTURE IS DEFINE AS FOLLOWS:

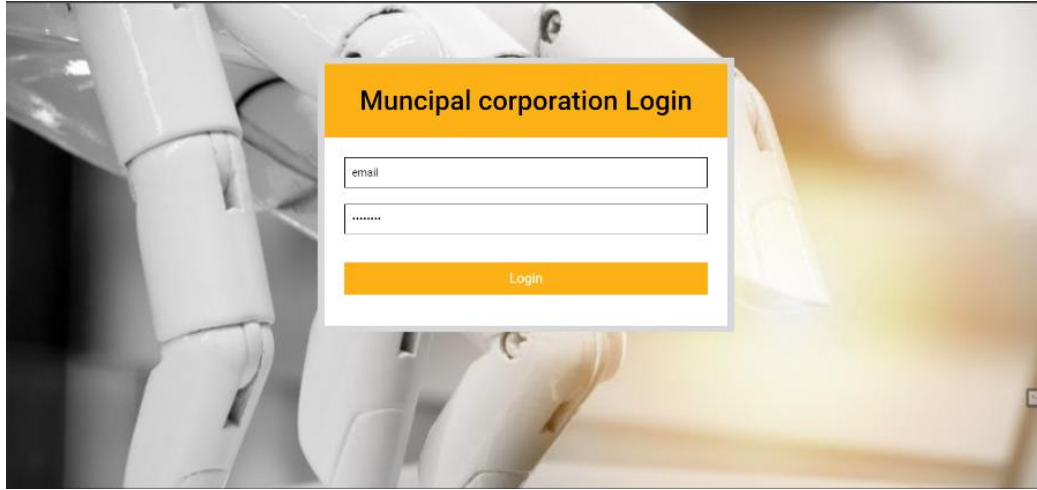


Admin: Admin can add the municipal corporation and view the honking zones which are included by the municipal corporation on GPS. He also view and delete the of municipal corporation and also view all details and data of others which is included by the municipal corporation.



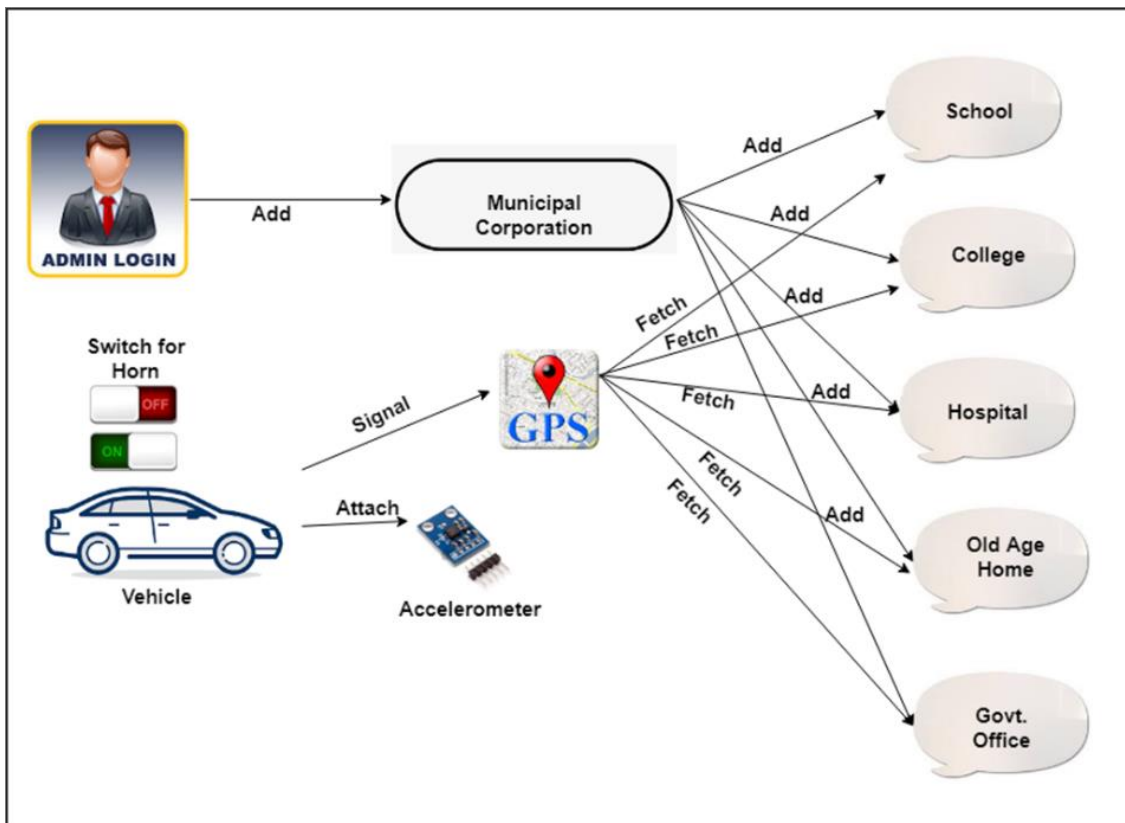


Municipal Corporation: In our system the municipal corporation can add the honking zones like hospital, school, college, and old age home and government offices in cities as a honking zone with their longitude, latitude, Name, Type, and other description and decide the speed level of the vehicle which is travel from near the honking zone.



System: In this web application when any car or vehicle goes from any honking zone the accelerometer can track the current speed limit of that vehicle. This accelerometer can built in the vehicle which is note the speed of vehicle during honking zone which is declare and saved on GPS by municipal corporation, if the detected speed of vehicle is greater than the speed which is allowed in honking area then the pizzobuzzer will buzz and get alert to driver to drive slowly in honking zone area. It also check the horn of vehicle if it on then the in-built switch press action will automatically decrease the noise level of the horn and keep safe and noise pollution free drive.

IV. SYSTEM ARCHITECTURE





V. CONCLUSION

The accidents that are caused due to loud music inside the vehicle, which inhibits the ability of the driver to alert mitigate by this system. In this paper we developed a new design to control the speed of the vehicle. In normal driving mode, we can expect other vehicles interfering nearby and possibly blocking or attenuating RF signals. In this aspect, we are going to use GPS location for restricted areas. Noise pollution seems to be a general problem, but when seen through global perspective it is a major issue. When honking unnecessarily is reduced it results in a peaceful environment and less stress for the daily travelers. Travelling is a part of day to day life for every human, so when noise due to unnecessary honking is eliminated humans will be able to sleep, concentrate and improve their memory efficiently. Therefore, with this initiative overall stress is reduced and a peaceful journey will begin.

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