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Intelligent Transportation System

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Abstract: People have experienced frequent communication and information exchange in recent years as a result of the proliferation of mobile devices. For example, when people go on vacations, it is common for each person to bring a smart phone with them to get information about nearby attractions. When a user visits a location, the application will provide useful information based on the user's current location preferences and previous visits to locations and their traffic signs. This new feature of map will learn your preferences and will display traffic signs in the area this system would display all traffic signs in and around the city including No Parking, Give Way, Speed Breakers ,Zebra Crossings ,Signals ,Tunnels, Sharp Curves, Speed ,No Overtaking Zones, Accidents Ponds, and Cycle Lanes. The use of popularity based filtering allows users to see all of the traffic signs in the area.
Keywords: Traffic signs, Intelligent Transportation.

I. INTRODUCTION

Today's world moves at a breakneck pace, and in order to keep up, the system must become more efficient and precise. So we came up with the idea of redefining the globe by making the most efficient component of daily life, "TRAVEL," even more efficient. We recommend traffic signs users based on the user statistics. Humans require opinions on everything they do or select. People enjoy going on adventures and seeing new areas. When a person visits a new city for vacation or business, they are unfamiliar with the traffic signs.

The majority of accidents are caused by a lack of understanding of traffic rules and regulations. To ensure everyone's safety, it's vital to grasp India's traffic rules and regulations. That is why, to assist those who are new to something, suggestions are encouraged everywhere (known or unknown traffic signs).This map aids in identifying user requirements, analyzing all available data, and recommending traffic signs.

This project's main goal is to deliver correct advice messages for parameters such as No Parking, Give Way, Speed Breakers, Zebra Crossings, Signals, Tunnels, Sharp Curves, Speed, No Overtaking Zones, Accident Ponds, and Cycle Lanes. The major goal is to provide recommendations for road accident prevention and protection using all available road safety measures. Its goal is to make pedestrians, two-wheelers, four-wheelers, multi-wheelers, and other types of transportation safe when travellingon the road.

So we came up with an original idea to recommend traffic signs based on user data. Traffic signs are the most visible communicators on the road, protecting cars and pedestrians from dangerous hazards. Every day, approximately 400 road accidents occur on Indian highways, costing lives and accounting for 3% of the country's annual GDP. As a result, the government has made it mandatory for anybody seeking a driver's licence to be familiar with traffic signs.

II. GENERAL INFORMATION ABOUT TRAFFIC SIGNS

A. What are the Traffic Signs/Symbols

Recognizing traffic signs and symbols in India is crucial to your road safety, whether you are a novice or an expert motorist. In India and around the world, traffic signs are used to silently regulate road behaviour; disobeying them is illegal. India's road safety regulations are upgraded every year.

B. Traffic Rules & Regulations

In India, traffic regulations are necessary to ensure the safety of all road users. Surprisingly, the majority of road accidents are caused by a lack of understanding of traffic rules and regulations. To ensure everyone's safety, it's vital to grasp India's traffic laws.

III. LITERATURE REVIEW

International Research Journal of Engineering and Technology (IRJET) has represented a review on When a user visits a location, the programme will provide valuable information based on the user's current location preferences and previous visits. This new feature of Google Maps will learn about your unique interests and make recommendations for nearby locations.This paper concluded that To summarise, make people's lives easier by not asking for suggestions from strangers and instead using filtering methods rather than classification to generate suggestions. This operates similarly to many online e-commerce sites, but it can also be used to provide suggestions over the map using Google APIs.

Victor J. D. Tsai*, Jyun-Han Chen, Hsun-Sheng Huang has represented a review on the development of intelligent transportation systems (ITS) and autonomous vehicle driving systems (AVDS) has centred on traffic sign detection and recognition (TSDR). Unlike most TSDR systems, which deal with real-time images captured by in-vehicle cameras, this research focuses on developing techniques for detecting, extracting, and positioning traffic signs from Google Street View (GSV) images.

Vahid Balali1*, Armin Ashouri Rad2 and Mani Golparvar-Fard3 have represented a review on Detection, classification, and mapping of U.S. traffic signs using google street view images for roadway inventory management. The proposed method has the potential to deliver inventory information on traffic signs in a timely manner and tie into existing DOT inventory management systems, given the reliability of performance demonstrated through experiments and the cost-effectiveness of collecting information from Google Street View imagery. These spatio-temporal representations give DOTs information on how different types of traffic signs deteriorate over time, as well as useful condition information for anticipating sign replacement plans

IV. DATA COLLECTION

A. Selected Area

From rotary club nigdi pradhikaran to pimpri chinchwad collage of engineering and research. Length road = 5.46 km.

B. Road Survey

On-Road Instructions	Distance from Rotary Club (in km)	On-Map Signs
One Way	0.02	
Speed Breaker	0.03	
Speed Breaker	0.07-0.2	
Signal- Sambhaji Chowk	0.23	
No Parking	0.23	
No Parking	0.25	
One Way	0.25	
Parking Lot	0.28-0.32	
Petrol Pump	0.48	
Signal- Pradhikaran NavNagar Vikas	0.59	
Bridge	0.63	
Single Curve	0.67-0.69	
Rumble Strip	0.8	
Zebra Crossing	0.83	
Cycle Lane	0.84	

Signal	0.85	
Cycle Lane	0.91	
On-Road Instructions	Distance from Rotary Club (in km)	On-Map Signs
Signal	0.99	
Zebra Crossing and Bent to Left	1	
Cycle Lane	1.02	
Tunnel on Left Side	1.03	
Zebra Crossing	1.04	
Two Wheeler Parking	1.04-1.06	
Cycle Lane	1.93	
No Parking	1.94	
Cycle Lane	1.96	
No Parking	1.99	
Crossing	2.1	
Pccoe College	2.02	
Tunnel	2.05	
Crossing	2.06	
	Distance From D.Y Patil Bus Stop (In Km)	
Cycle Lane	0.09	
Cycle Lane	0.19	
Two Wheeler Parking	0.2	
Give Way	0.21	
Signal	0.25	
Cycle Lane & Two Wheeler Parking	0.3-0.32	
No Parking	0.33	
Give Way	0.35	
Four Wheeler Parking	0.35	
Cycle Lane	0.42	
Give Way	0.45	
Hospital	0.47	
Crossing & Signal (Dr. Babasaheb Ambedkar Chowk)	0.48	
Crossing	0.5	
Cycle Lane	0.5	

Give Way	0.52	
Four Wheeler Parking	0.53-0.56	
Cycle Lane	0.7	
No Horn	0.59	
Cycle Lane	0.61	
On-Road Instructions	**Distance from Rotary Club (in km)**	**On-Map Signs**
Four Wheeler Parking	0.63	
Cycle Lane	0.66	
No Horn	0.71	
Four Wheeler Parking	0.73	
Signal & Speed Breaker	0.74	
Pedestrian Crossing & Single Curve	0.77	
Crossing	0.8	
Two Wheeler Parking	0.89	
Give Way	0.9	
Cycle Lane	0.91	
Two Wheeler Parking	0.93	
Hospital	0.94	
Cycle Lane	0.95	
Give Way	0.96	
Two Wheeler Parking	0.97	
Cycle Lane	0.97	
Four Wheeler Parking	1	
Signal & Round About (Ravet Chowk)	1.08	
Signal	1.3	
BRT	1.18	
50m Area Crossing	1.22	
PCMC & Speed Breaker	1.24	
Bridge	1.35-1.39	
Petrol Pump	1.52	
Accident Pond	1.61	
Signal & PCMC & Crossing & Speed Breaker	1.79	
Single Curve	1.85	
Signal, PCMC	1.88	

Speed Breaker	1.96	
Speed Breaker Ahead	2.12	
Signal	2.16	
Signal	2.22	
Speed Breaker	2.78	
Speed Breaker	2.89	
Speed Breaker	3.17	
Turn Right	3.19	
On-Road Instructions	**Distance from Rotary Club (in km)**	**On-Map Signs**
S.B Patil	3.35	
PCCOE&R	3.4	

Fig. 2 Traffic Signs

Fig. 2 Traffic Signs

Fig. 3 Traffic Signs

Fig. 3 Traffic Signs

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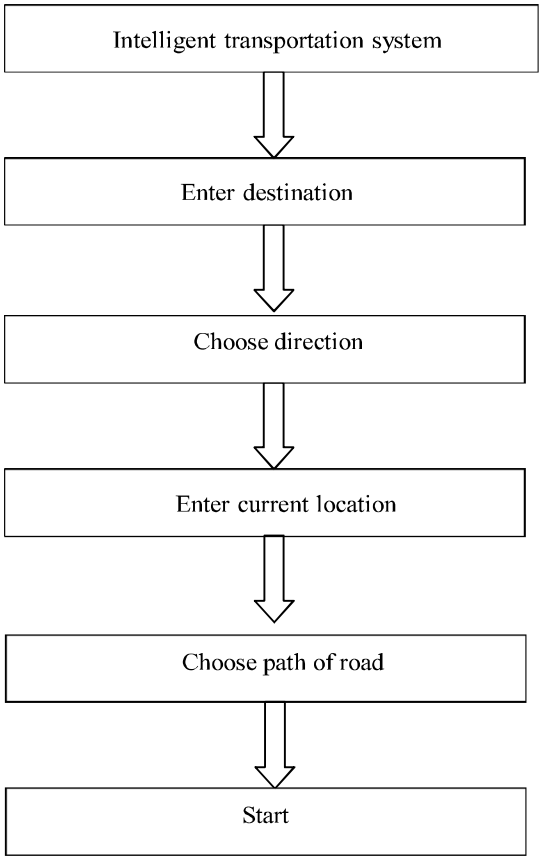
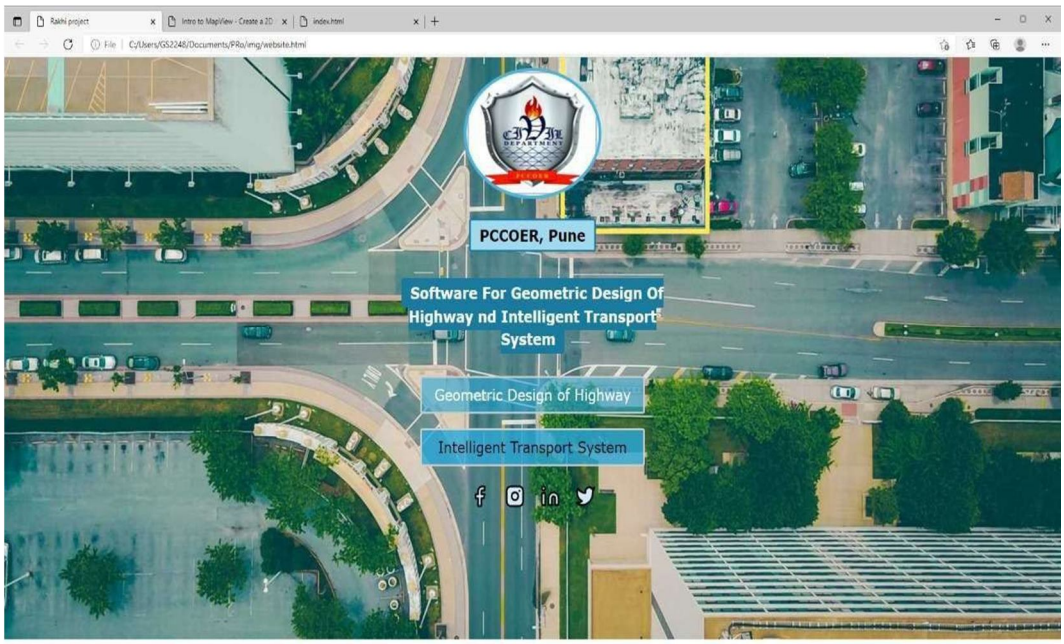
V. WORKING OF INTELLIGENT TRANSPORTATION SYSTEM



VI. SNAPSHOT OF INTELLIGENT TRANSPORTATION SYSTEM

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CMS Kerala Bhavan, Akurdi, Pune
Cafe Choco Craze
Offer available
Akurdi
Shawarma King
LITTLE CHINA
Top rated
ABC Rutuja
NAADBRAMHA IDLI
Fast Food
Gurudwara Chowk
KTM Husqvarna
Less busy than usual
Sant Baba Moni Saheb Vridh Anand Ashram
Signal
Public
Directions
More info


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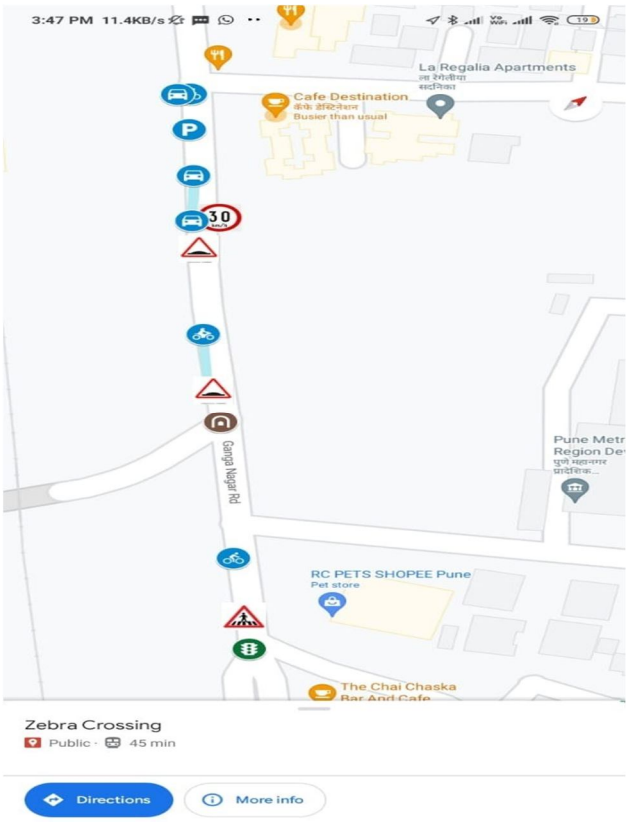
MQ2C+F8X Rotary Club Circle, Sector No...
See similar places
City Pride School
Orchids The International School - Nigdi
Sant Tukaram Garden
Rotary Club Circle
Ram Mandir
Ram Mandir Rd
Café TTMM
Not too busy
Railway Station Rd
LIC Zonal Training Centre, Jeevan Vidya
CMS English Medium High School
PANORTHO HOSPITAL - Best orthopedic...
Akurdi Chikhali Rd
Rotary Club Circle
4.8 (4)
Club · 35 min
Directions
Start
Save
Share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La Regalia Apartments
Cafe Destination
Busier than usual
30
Ganga Nagar Rd
RC PETS SHOPEE Pune
Pet store
The Chai Chaska
Zebra Crossing
Public · 45 min
Directions
More info


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KENDRIYA SADAN CBI
SLOW DOWN
SLOW DOWN
PMP bus stop
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Akurdi Station Parking
Travels Parking
Akurdi
Dr Babasaheb Ambe
Shawarma King
No Parking
Public · 42 min
Directions
More info

VII. CONCLUSION

To summarize, following traffic laws, avoiding excessive speeds, and increasing overall awareness can significantly reduce the likelihood of a road accident. Finally, and most importantly, citizens and government entities must strictly follow road safety regulations.

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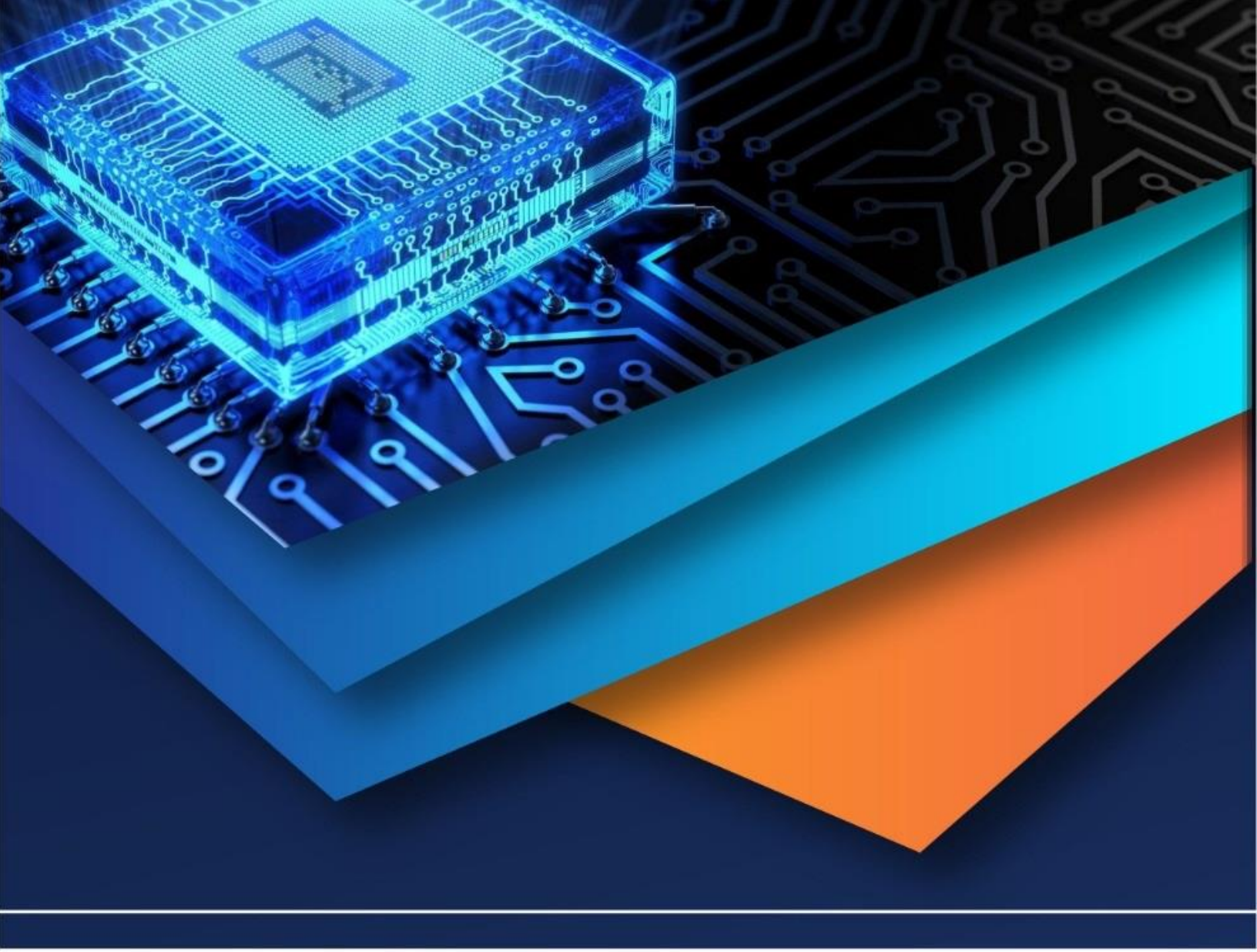

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