

SAFETIR?

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# What is SAFETIPIN?

Safetipin is a technology platform that works to make our communities and cities safer by collecting and disseminating safetyrelated information on a large scale through a set of map-based applications.







#### **SAFETY AUDIT**

This is the core of Safetipin. Based on the global experience of 20 years on safety audits, parameters that define safety perceptions are fixed.

# **AUDIT POINTS**

Each safety audit will appear as a point on the Safetipin App.

Each point gets uploaded immediately and is then seen collectively on the screen.

The red signifies unsafe points, orange a bit safer and green would be relatively safe points.

#### PARAMETERS



LIGHT

VISIBILITY

PEOPLE



WALK PATH



TRANSPORT

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# **SAFETIPIN MAPPING IN SURAT**





# **Data Collection**

Time of Data Collection: 6:30	0 PM-9:30 PM
Images Collected:	1,63,304
Road Length Covered:	1,333 km







Phone with Safetipin Nite Application is mounted on the windshield of a moving vehicle for capturing night time pictures. Pictures are taken at every 50 metres interval and uploaded to our system. These are then assessed according to the safety audit parameters.





# **Data Analysis**







#### **SAFETY SCORE**

The Safety Score at an audit location reflects the aggregated rating of all the parameters. For each audit point, a numeric value between 0 and 5 is provided where 0 is poor and 5 is good in terms of overall safety.

# A total of **15,620 safety audits** have been generated.







# **Key Findings**









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#### 0- Poor Light

1- Some Light

2- Enough Light

3- Bright Light

The Lighting parameter measures the amount of illumination at a place and ranges from dark to bright. For the rating of the Lighting parameter, the sources which are considered are streetlights, light from houses, shops and street vendors. Temporary sources of light like the light from cars are not considered when rating this parameter.



#### LIGHTING









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# **LIGHTING ISSUES**









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The Walkpath parameter indicates whether a person can walk at a place. This includes the quality of the pavement or the space designated for walking along a road. If a pavement is present, its quality is assessed. If it is a residential lane, then the area for walking along with the condition of the road (broken or obstructed) is assessed.





#### WALKPATH







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#### WALKPATH ISSUES









#### WALKPATH BLOCKINGS











can see a person who is on the street. It is based on the principle of "eyes on the street", which refers to social and built environment to provide natural surveillance to the pedestrians. This includes street vendors, windows and doors of shops or buildings that can act as natural surveillance.



The Visibility parameter refers to the number of people that



3- Highly Visible

2- More Eyes

0- No Eyes

1- Few Eyes





#### VISIBILITY







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#### WALKPATH AND VENDORS

The heat map on the left is a visualization of the walkpath conditions around the mapped vendors in and around the city.







0- Unavailable (>10 Minutes away)

1- Distant (5-10 Minutes away)



2- Nearby (2-5 Minutes away)



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3- Very Close (2 Minutes away)

#### **PUBLIC TRANSPORT**



The Public Transport parameter measures the distance from the audit point to the nearest mode of public transportation. Through this parameter, the accessibility to the different modes of transport is measured. Public transport includes both formal and informal modes of transport such as, buses and e-rickshaw/autos, etc.





#### **PUBLIC TRANSPORT**









#### **BUS STOPS AND LIGHTING**

The heat map on the left is a visualization of the Lighting conditions around the existing bus stops in the city of Surat





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#### RECOMMENDATIONS

Parameter	Findings	Recommendation
Lighting	893 point were identified with no streetlights (Dark spots)	Installing new streetlights and fixing the dysfunctional streetlights will improve the lighting rating of the Surat city.
Walkpath	690 audit points were identified with no existing walkpath	The existing walkpath in most parts is inaccessible because of poor condition and obstructions. Removing walkpath obstructions and having safe walking surfaces will improve accessibility in the city.
Visibility	1329 vendors were mapped across the city	Dedicated vending zones should be provided for vendors to aid the process of improving visibility on streets. The infrastructure such as lighting and walkpath around these vending zones also should also be improved to facilitate the pedestrian movement in and around these vending zones.
Public Transport	494 bus stops were audited across the city.	Bus stops were found with poor lighting (196 ) and poor walkpath condition (206). Improving the lighting and walkpath condition around the bus stops will improve the accessibility of these bus stops for the users of the city.





# **Data Output**





#### **DATA IN CSV FORMAT**

	A	В	С	D	E	F	G	Н		J	K	L	M	N	0	Р	Q
1	ID	Latitude	Longitude	Comment	Lighting	Openness	Visibility	People	Security	Walkpath	Public Tra	Gender U	Feeling	User ID	Safety Sco	Images	
2	705062	21.21727	72.88766		2	2	2	1	0	1	2	3	2	17333	4.2	http://d	22kqls551uem
3	705063	21.21638	72.88801		3	2	1	2	1	1	2	1	2	17333	4.2	http://d	22kqls551uem
4	705064	21.21557	72.88743		3	2	0	0	0	2	2	0	1	17333	2.6	http://d	22kqls551uem
5	705065	21.21526	72.88641		3	2	0	0	0	2	1	0	1	17333	2	http://d	22kqls551uem
6	705066	21.21497	72.88546		3	2	1	1	0	2	1	0	1	17333	3	http://d	22kqls551uem
7	705067	21.21473	72.88452		2	2	1	0	2	1	1	0	1	17333	2.6	http://d	22kqls551uem
8	705068	21.21444	72.8836		3	2	2	2	0	2	1	0	1	17333	4	http://d	22kqls551uem
9	705069	21.21424	72.88259		3	2	2	1	0	2	2	0	1	17333	4	http://d	22kqls551uem
10	705070	21.21406	72.88158		3	2	2	1	1	2	2	0	2	17333	4.2	http://d	22kqls551uem
11	705071	21.21329	72.88117		2	3	2	1	1	1	3	0	2	17333	4.2	http://d	22kqls551uem
12	705072	21.2128	72.88212		3	3	1	2	0	1	2	0	1	17333	4	http://d	22kqls551uem
13	705073	21.21251	72.88317		3	2	3	2	0	1	2	1	2	17333	4.3	http://d	22kqls551uem
14	705074	21.2128	72.88424		2	3	3	1	0	1	2	0	1	17333	4	http://d	22kqls551uem
15	705075	21.21316	72.88532		3	2	3	2	0	1	3	0	2	17333	4.3	http://d	22kqls551uem
16	705076	21.21355	72.88637		2	2	3	2	0	1	3	0	2	17333	4.2	http://d	22kqls551uem
17	705077	21.21396	72.88743		2	2	3	2	0	1	2	2	2	17333	4.3	http://d	22kqls551uem
18	705078	21.21444	72.88847		3	2	3	2	1	1	3	0	2	17333	4.3	http://d	22kqls551uem
19	705079	21.21548	72.8885		3	2	1	1	0	1	2	0	1	17333	3	http://d	22kqls551uem
20	705080	21.21637	72.88824		3	2	1	1	1	1	2	0	1	17333	3	http://d	22kqls551uem
21	705091	21 21722	C0200 CZ		2	2	2	2	1	2	2	0	2	17000	1 2	http://d	Olkale551uom
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# Integration of Safetipin data with other layers







#### **PUBLIC SPACES AND PEOPLE**

The heat map on the left is a visualization of the presence of people around the important public spaces in the city of Surat







#### SAFETY SCORE AND LAND USE

The map on the left is a visualization of Safety Score overlayed on the proposed master plan of Surat city







#### WARD WISE SAFETY SCORE

The map on the left is a visualization representing the ward wise Safety Score in Surat Municipal Corporation boundary limits.





# **THANK YOU!**



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Safetipin can be downloaded FREE from:



Available on the App Store

