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Survey on Analysis of Safe Path on the Basis of Social Media Data

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Abstract: *In today's world the events like victimization and unlawful and illegal activities have become the notions of prime concern from the point of view of the safety of mankind. Sensible, reliant, and smart systems have been seen as emerging giants which may be used expeditiously for private security. A bunch of the latest apps is developed to produce a security system for girls via their phones and other smart devices like smart watches and smart gadgets. As per the reports and records of the World Health Organization (WHO) and the National Crime Records Bureau (NCRB) a social government organization, 35 percent of girls everywhere on the planet square measure are facing a great deal of unethical Physical Harassment in public places like Railways, Bus- stands and pathways, transportation corridors, etc. During this Paper, we've got reviewed assorted existing systems on security in general for everyone that is, in a generalized manner irrespective of gender. We've got fade a requirement for an advanced overall generalized security system that provides safe live public places likewise as traveling alone through public transport such as college Buses, Company Vehicles, rickshaws, cabs, trains, and personal automobiles. This paper projects a brand-new model for security in public places that aims to provide the safest of the available routes from the source to the destination (as entered by the user) by analyzing, studying, and classifying the information from various data facets and data domains. The prime role-playing technology behind the working model is the field of Machine Learning (ML) and Deep Neural Networks (DNN). To improve safe path management, it is critical to develop a real-time safe path analysis system that can detect, classify and predict the route, and detect the safest paths at any given time. In this study, a multidimensional detection and prediction approach was proposed to achieve these requirements by offering numerous varieties of ways to access them.*

Keywords: Safe Path Analysis , Machine Learning , Support Vector Machine

I. INTRODUCTION

Crime control, and public security especially women's security are serious concerns for any country around the world. Police and authorized personnel from various intelligence agencies constantly work for the same. Despite constant efforts and measures like patrolling, timely investigation, recording and documentation of crime scenes, and using different types of technologies, equipment, and methods like CCTV surveillance, forensic monitoring regularly, and aerial inspection through -simple camera drones (for serious cases) to control the crime, a significant change could not be observed.

Moreover, generalized protection and women's safety is still serious issue in various parts of the world and countries. Gender ideologies in India have seen an improving sign among all people within the society in the upbringing of the social status of women in different workplaces and environments but the status of women's security remains the same or has been worsened. So, we have developed a system to find the safest path for mankind when an individual is going outdoors alone. And also, provide safety to the concerned when he/she is in trouble or a helpless condition, he/she can also notify the situation to family members or the nearest police stations.

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II. METHODOLOGY

A model trained on social media data is used to classify paths as safe and unsafe. It uses the crime rate data of a particular region to its population to determine whether it is safe or unsafe. When the path from source to destination is entered with its intermediate points location it is classified between safe and unsafe using the SVM model trained on social media data is used to classify path as safe and unsafe. It uses the crime rate data of a particular region to its population to determine whether it is safe or unsafe. When the path from source to destination is entered with its intermediate points location it is classified between safe and unsafe using SVM

III. RELATED WORK

In paper [1] we are focusing on a scenario where a woman walking alone on the road faces harassment either from the front or backside during the day or night time. To overcome these issues, we have developed a smart portable device that can track the current location of the victim. When they feel insecure, their heartbeat increases which can be measured by the pulse sensor, and their stress level is monitored women may be able to convey the misery message through our smart devices to the trusted contacts and the cops. Such smart security devices can give quick responses for emergencies and prevent women from potentially shocking experiences. In addition to this, we can monitor certain parameters like the haemoglobin level of blood, the oxygen level in the blood, pulse rate, and stress. The main advantage of this device is small and easy to carry. The use of sophisticated components in this device gives more accuracy and it is more reliable. We are looking for a day when every woman can walk independently on the road.

In [2][7] paper, the author expresses that women are not safe anywhere and are most vulnerable when traveling alone on lonely roads and deserted places. Existing hand-held safety devices for women require human intervention for activating the device such as pressing the button or shaking the device etc after sensing the danger. We propose a solution that will try to overcome the disadvantages of the existing systems and also aim at providing false-proof safety to women. The proposed work aims at designing an IoT-based safety device that relies on providing security to women by the fingerprint-based method of connectivity to the device and alerting nearby people and police when a woman is not safe. An unsafe situation is sensed by fingerprint verification for a minute then it will automatically alert nearby people and police if the device senses no signal. Moreover, for first-hand safety, a shockwave generator is also designed that women can use to attack the perpetrator. Additional features such as sending group messages, and audio recordings are also part of the proposed design.

This research paper [3] focuses on the role of social media in promoting the safety of women in Indian cities with special reference to the role of social media websites and applications including Twitter platform Facebook and Instagram. Tweets on Twitter which usually contains images and text and also written messages and quotes which focus on the safety of women in Indian cities can be used to read a message amongst the Indian Youth Culture and educate people to take strict action and punish those who harass the women.

In this research paper [4] author feels that India is considered a well-developing nation and an economic core, and faces several evils known from ages like dowry, crime against women, sexual assault, abduction, and worst of all rape. The implementation of the acts and techniques for a safer women is not sufficient and has to be enhanced well enough. In order to overcome all these problems, we should aim on a promising society where women feel safer and secure throughout the world. This proposed idea describes the steps and process as to how the safety device works in ensuring the welfare of the women by instantly sending a message and the location of the victim to the pre stored contacts. This paper also describes as to how the assailant gets scared by the loud noise and the vibration created so as to let go off the victim.

This exploration paper [5] fundamentally centres around the job of web-based entertainment in advancing the well-being of ladies in Indian groups with splendid reference to the task of online leisure sites and packages consisting of Twitter stage Facebook and Instagram. This paper likewise centres around how an awareness of certain expectations on a piece of Indian culture can foster the normal Indian individuals so there ought to zero in on the security of ladies encompassing them. Tweets on Twitter which for the most element includes snapshots, messages, and statements that centre on the well-being of girls in Indian city communities can be utilized to peruse a message among the Indian Youth Culture and teach individuals to make a severe move and rebuff the people who hassle the

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ladies. Twitter and different Twitter handles comprise hash label messages which are typically spread throughout the entire globe as a degree for ladies to speak their views approximately how they sense while exiting for work or tour in a public vehicle and the condition of their psyche when obscure men encircle them and regardless of whether these ladies have a solid sense of security.

IV. CONCLUSION

The gap has been analysed, based on which problem statement is designed along with its objectives. The system helps all the people who want to travel across places fearlessly. Using this system, the user can find the safe route between multiple routes to increase his/her safety. The model studies analyse the data required for analysis and also make the proper prediction. Also, the path which is detected as unsafe is displayed along with the proper route. The user can rely on this system without any hesitation. The system further helps properly conveying of the state of the individual along with the proper messaging. The system is further studied and if developed can predict the routes as well paths from live data statistics.

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