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Predicting the Time Interval of a Daily Smoker using Navie Bayes

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Abstract: As we accumulate more and more data of people who smoke, and improving the calculation, exact investigation leads to conceivable and quitting cigarettes. Be that as it may, supposedly, little examination is been frequently conducted on people who regularly burn cigarettes, for example, at what time will he/she smoke. The framework designed will depict a model which dependent over the AI calculation to foresee day by day smoking time. The recreation informational index of smoking time information was built up by utilizing the populace data of smokers for illness control and avoidance. So as to take care of the issue of too little component data, we propose an element data extraction module.

Keywords: Machine learning, Supervised Machine Learning, Naive Bayes, Classification Rules

I. INTRODUCTION

Smoking affects most of our body organs like blood cells and lungs and many more but still people find reasons in order to smoke cigarettes many of these legitimizations are not sensible and truthful. Many people start smoking at young because they think it makes more developed and matured, so it is clear that this is not sensible information and it is well known for harming cerebrum. Smoking is to be stopped by all the individuals and even it is not only hazardous to them but even to the people who breathe in that smoke (passive smoker). Impacts of cigarette smoking may vary from an individual to individual. Smoking isn't just mainstream medical problem, yet additionally this can have phenomenal money related damage on the nation. Until each and every sole will cease smoking many singles will be dependent and will get health disorders and may lose their precious life. Smoking can make our body puny and can cause imperceptible end. In USA more than 4lakhs people have lost life that is around 5 demise each year and it is caused by the cigarette smoking. We can clearly say that 90.00% of all death are caused by ceaseless lung ailments and are by cigarette.

II. LITERATURE SURVEY

A System for Automatic Quantification of Cigarette Smoking Behaviour: Cigarette smoking remains the chief wellspring of preventable sickness in the United States. Albeit most tobacco organizations have created sifted cigarettes to decrease the degrees of certain poisons, smokers have adjusted their inward breath examples to make up for these more current "light" cigarettes. We portray another framework intended to inconspicuously screen such components of smoking conduct. The framework utilized a camcorder to catch motion pictures of smoking conduct. Consequently, picture preparing and investigation calculations were applied to the film casings to shape a period arrangement, named the smoking geography, which evaluated different boundaries of smoking conduct.

Tobacco Smoke Detectors for Non-Smoking Areas in the Building: The Research we have selected may intend us to gain more knowledge about tobacco and plan tobacco smoke alarms for the places where they don't smoke in that structure. So, all of these can be utilized for identification of smoke in different spots in the structure. This structure of the alarm triggered by smoke are planned using a Gas detecting Sensor and using this it is been stored as voltage. At the point when the sensor identifies vapour till when peak voltage is reached, by looking at the summary we can say that, the tobacco smoke alarms in this created zone. Using this framework, we can easily rectify smoke in the area not more than $20m^2$. The gadgets can distinguish smoke in a brief timeframe and can communicate something specific. This can notify the staff members at the structure to know that an individual is consuming tobacco where he is not supposed to do so.

Human Smoking Event Detection Using Visual Interaction Clues: This paper presents a novel plan to naturally and straightforwardly identify smoking occasions in video. In this plan, a shading-based proportion histogram investigation is acquainted with separate the visual pieces of information from appearance communications between lit cigarette and its human holder. The strategies of shading re-projection and Gaussian Mixture Models (GMMs) empower the assignments of cigarette division and following over the foundation pixels. At that point, a key issue for occasion

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investigation is the non-ordinary type of smoking occasions. Hence, we propose a self-decided system to examine this dubious occasion utilizing HHM structure. Because of the vulnerabilities of cigarette size and shading, there is no programmed framework which can well examine human smoking occasions legitimately from recordings. The proposed conspire is perfect to identify the smoking occasions of unsure activities with different cigarette sizes, hues, and shapes, and has ability to stretch out visual investigation to human occasions of comparable communication relationship. Exploratory outcomes show the viability and constant exhibitions of our plan in smoking occasion examination.

III. SYSTEM ARCHITECTURE

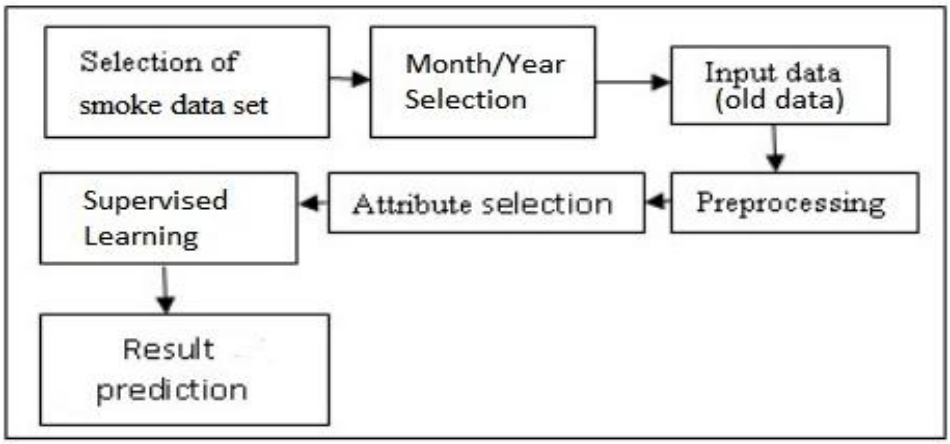

Figure1: System Architecture

IV. PROPOSED WORK

Proposed framework is a mechanization to discover the individuals smoking time. Framework discovers progressively successful approaches to investigate smoking practices and find better approaches to stop smoking, and precise data set can be acquired by the prediction of time interval of smoking. In a wake of deciding when an individual smoke the application sends him proper recordings/photos of his family. This may assist with making an individual to stop smoking. We develop a real time system to predict the smoking time using machine learning algorithms. The application uses supervised learning technique to predict the smoking time.ML concerns with construction and study of system that can learn from data. For example, ML can be used in E-mail message to learn how to distinguish between spam and inbox messages. In the project we use supervised learning techniques to process smoke data dataset. We use Naive Bayes or KNN or decision tree Algorithm to predict time of smoking. The system makes use of "ML technique - Naive Bayes" or "KNN or Decision Tree or ID3" algorithms to process data.

V. WORKING PROCEDURE

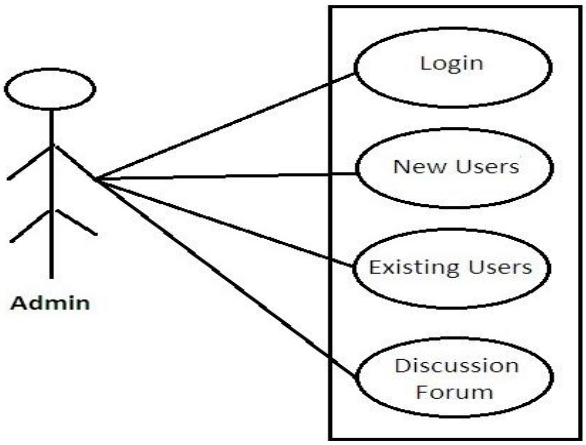

Figure 2: Diagram of Administrator Use case

This is a real time application with three users that is Admin, doctors and users. Doctors, users and admin need to input their id and password to login into the system. The admin can add the Doctors and users into the system, he can manage the dataset, he can view the prediction module and he can update the profile. Doctors and users need to enter their id and

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password given by the admin to login to the system. They can view the prediction module, post queries if any, and can also update their profile. These are the functionalities of the Doctors and users. When the application is run, if it is the visitor opening the application, then only about us, contact us and homepage will be displayed. If he is not a visitor, then the user need to login. If the entered credentials are valid, then if it is the admin then he well is redirected to his home page where he can add the Doctors and users, answer queries of Doctors and users update the profile or view the prediction module. If the entered credentials are of a Doctors and users, then it moves to main page where the users can view the prediction module, update the profile or post queries.

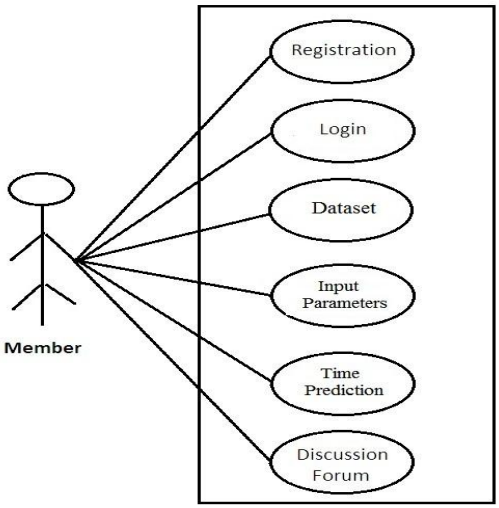

Figure 3: Diagram of Member Usecase

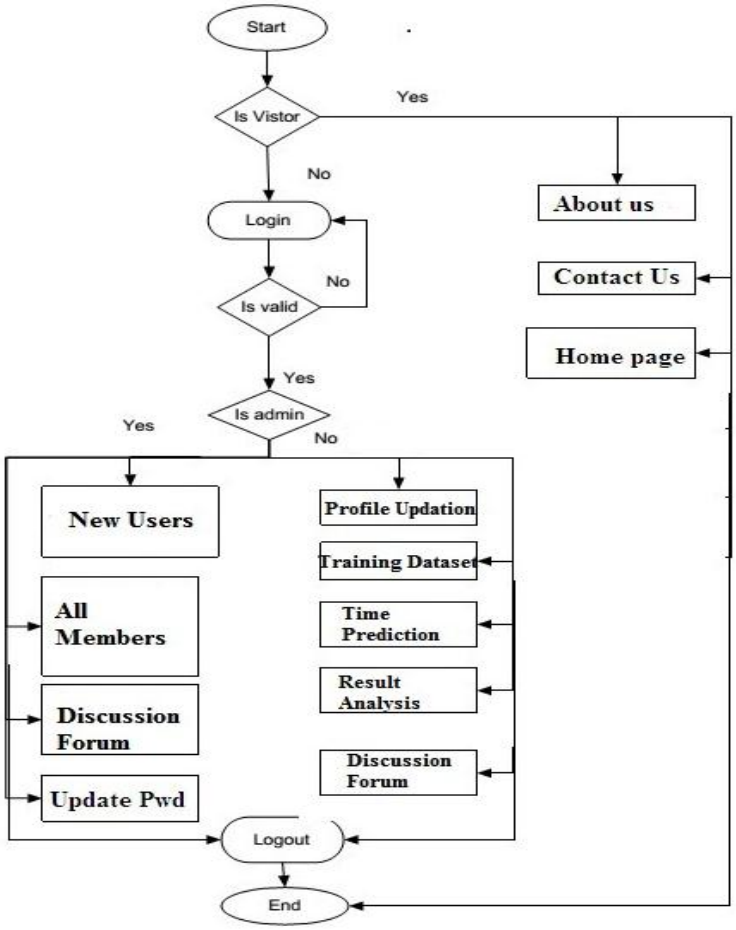

Figure 4: Flow Chart

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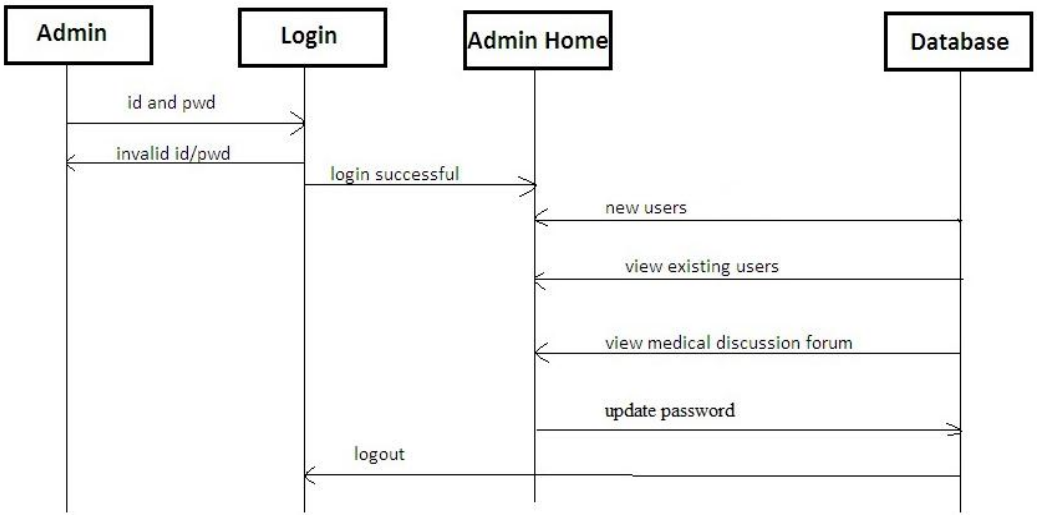

Figure 5: Sequence Diagram for Admin

The sequence in which the above-mentioned activities takes place is shown using a sequence diagram. The admin gives is id and password to login to the system. On success, his home page will be displayed. On failure he will again be shown the login page. The admin can add the Doctors, users in to the server, he can view the Doctors, users from the server, add training dataset into the server, view the prediction module from the server, update the contents in the server, etc. And when he logs out, he will be taken back to the login page. When the Doctors, users' needs to login, his id and password should be entered in the login page. On success home page will be displayed. The Doctors, users can post the queries which will be saved in the server, he can view the reply for queries from the server, update the profile, view educational data from the server, etc. After he logs out, the login page will be displayed.

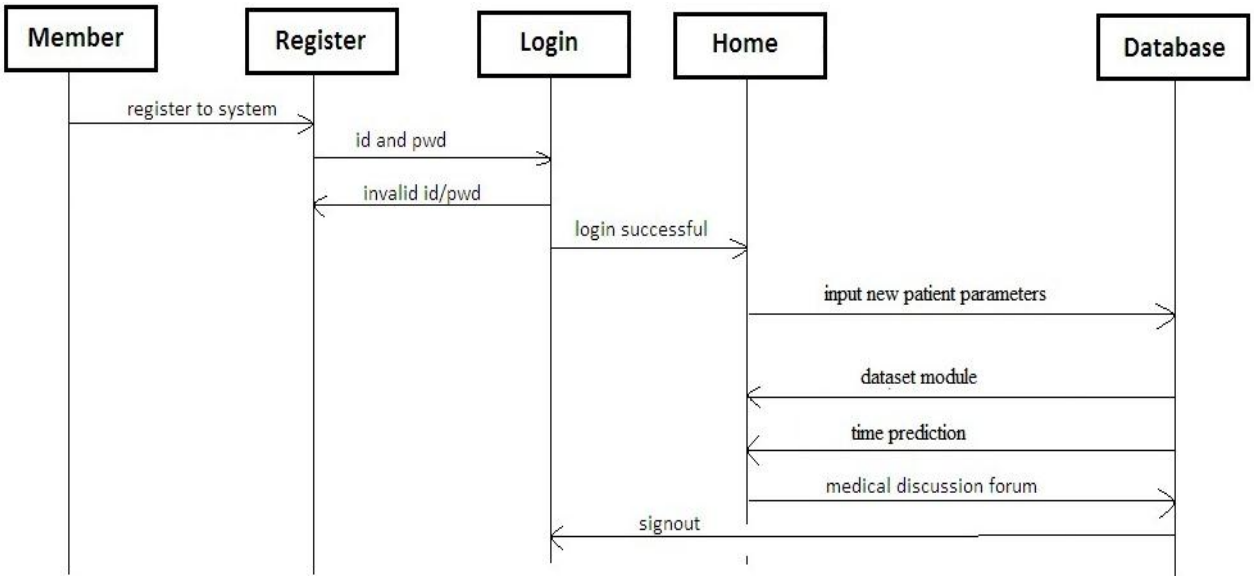

Figure 6: Sequence Diagram for Student

We are building a real time application where it is useful for Hospitals, rehabilitation centre. Currently none of the medical sector applications does this and we use data science algorithm to get better and accurate results. Thus the chosen design is better.

VI. RESULT ANALYSIS

The aim of our work was to develop to real time project which can by the normal in order to quit smoking. We have developed a real time project which easily predict the time interval of a smoker and it can be easily be accessed by anyone which doesn't have the knowledge of machine learning. By giving the basic details of the patient such as glucose level, his Blood pressure, his residence type we can predict at what time of the day will he/she will smoke much and all these data can be used by the rehabilitation centres to treat the patients present and even it can be used by the research people

for their research work or even common man can use this The result that is calculated by this project can easily understood by a layman as the output will be in terms of 0,1,2,3 which indicates the different time interval of the day
We have actually used Naive Bayes algorithm to predict the time interval and the accuracy that we have achieved is 99% which is very high value even we don't have any other software based project in the real world today so we can conclude that our project may help smokers to quit smoking permanently.

VII. CONCLUSION

In the previous papers that we have went have only used hardware components such as sensors or even image processing which is time consuming and even it is not cost effective but our project doesn't have any kind of hardware it completely a software based project so it can be both cost effective and not much time consuming.

VIII. FUTURE ENHANCEMENT

There is very huge space for the future enhancement, our project can be still more upgraded by sending direct messages to the patients family and even we can design a wrist watch which can be used to display the image of his/her children or any of his family members so that by seeing that he/she may quit smoking and even we can use some GPS tracking system in order to track that patient when he/she goes near any smoking spot and there is further more space for future enhancements which can be worked in the future.

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