

Model to Predict the Health Based on Alcohol Consumption

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Abstract—Today alcohol consumption is the key problems faced by entire society. Consuming alcohol affects every individual differently. Mostly adolescents consume before their legal age i.e. 18. In India Alcohol drinking age differs from state to state; primarily it is between 21 to 25. There have been many deaths reported by alcohol consumption due to organ failures as well as accidents. If we consider the various factors that are leading to the consumption of the alcohol then we can take precautionary measures to avoid it. This paper surveys the techniques used to identify the effect of alcohol on the customer, namely gait technology. By considering the amount of alcohol the consumer drink, Our Aim is to build the model which will mostly predict the health of alcohol consumer and classify risk of getting highly or moderate effect on the health of consumer and analyses the trends and patterns of how alcohol is affecting the overall life aspects of youth and how health is suffering substantially. This paper describes the reasons of alcohol consumption and factors related to alcohol consumption.

Keywords: Classification, Data analytics, Machine learning

I. INTRODUCTION

As alcohol consumption is a World Wide problem and is one of the major leading cause of violence and deaths. It has adverse effects on health and can lower the human productivity levels. Young children have lots of potential and their brains are the most formative. Alcohol gives momentary pleasure and has serious repercussions after that. It loses ones sanity which leads to injury, accidents or hasty decisions. Our paper and along with other papers taken into reference we would like to show how machine learning can be useful in detecting the alcohol levels in human body and risk of getting injured. Our main focus is on the youths and to help them overcome alcohol addiction. We have referred to Kaggle[1] survey dataset of school students who consume alcohol and the reason for drinking the same. The main aim is to bring a sustainable environment for community at large so that there is peace and law maintained in the country.

II. LITERATURE SURVEY:

Technology Use for Predicting quantity of alcohol consumption and risk of affecting by consumption of alcohol

This Research paper of author Joshua L.Gowin [2] works on the use of neuroimaging to predict relapse in stimulant dependence and mention about comparison of linear and machine learning models. In this technique neural imaging is performed with the help of PET/FMRI. A PET/FMRI scan is a

two-in-one test that combines images from a positron emission tomography (PET) scan and a magnetic resonance imaging (MRI) scan. This new hybrid technology harnesses the strengths of PET and MRI to produce some of the most highly detailed pictures of the inside of your body currently available. The report of this scanning will help neural processing of risky decisions in participants who consume alcohol by comparing the report with healthy participants. Following are the parameters which were considered for predicting the risk of injured by alcohol consumption.

Gait [3][2][4] refers to human manner of walking, running, stepping. Gait recognition is one kind of biometric technology that analyses the movements of each body part the knee, the foot, the shoulder and so on. Most people binge drinking alcohol and think that they can control their behaviour but excessive drinking is associated with significant psychosocial and health consequences. Gait technology is very useful in determining human. It is connected to smartphones and smart watches. Gait impairment gathers human activity data like the way they walk and other body part movement to classify how much a person is drunk. It has some sample data and makes classification based on them. This technology basically uses Random Forest Trees and J48 Decision Tree for classification. Data for this gait technology is taken from different sensors through mobile phone,watch.

Predicting the factors mostly lead to alcohol consumption and also analysing trends and patterns of frequent reasons leading to alcohol consumption:

Dataset:

The survey dataset we get from kaggle was of students math and Portuguese language courses in secondary school[5]. It contains a lot of interesting social, gender and study information about students. The following are the parameters that are considered in this dataset.

Most of the research paper [6][7][8] work on this dataset for Predicting pass and fail with the help of grades or predicting health of the individual on the basis of their alcohol consumption. They also build the different models for

classifying high risk and low risk to the particular individual through alcohol consumption.

The models they use were decision tree classifier, Random forest, Linear machine learning. Best model we analyze overall was random forest having maximum accuracy.

III. PROPOSED SYSTEM

As Survey data in most research paper use was for Portuguese student. What our idea will suggest that we can collect the survey of Indian youth regarding the factors that lead them to alcohol consumption. Factors we will consider will be as age, Relationship problem, Academic growth, For fun, occasionally, no of drinks and can predict the factor with highest probability leading to alcohol consumption of youth.

IV. CONCLUSION:

We conclude that we will combine technologies such as gait we can predict risk of injury by detecting alcohol consumption level. Then the survey of alcohol consumer can be taken and the factor affecting most can be taken through Naive baye's classifier and trends and patterns can also be analyses the various trends which leads youth for alcohol consumption. After considering various parameters through this survey we can find which is the most probable reason in youth for this vicious act. This survey will also help Rehab or counselling sessions. And the councilors and doctors get an idea to carry out the treatment better and faster.

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