Analyzing and Forecasting User Behavior for Enhanced Predictive Insights

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ABSTRACT
Sentiment analysis has advanced to the point where it may be used to understand how individuals or a specific person behaves through comments or tweets on numerous social media platforms. To comprehend the general attitudes contained in the data gathered from various social media platforms, sentiment analysis, also known as opinion mining, is employed. Thanks to social media sites like Instagram, Facebook, Twitter, and others, and the Internet, people are more exposed to the outside world and may share their opinions. The public has come to value social media more as a result of quick and inexpensive communication. Data from social media platforms can be utilized in many commercial and scientific contexts. The combination of sentiment analysis and behavior analysis made the extraction of needed or useful data more easy and simple for various applications, which include character analysis, depression testing, etc.

KEYWORDS: SVM(Support Vector Machine), Compromised User, Sentiment Analysis

I. INTRODUCTION

Web browsing is defined as searching for useful information from the web and displaying it to users. There are different ways to obtain desired information from the server logs. Web browsing is the process of extracting useful information or particular data from server. In this browsing process, browser find outs the users are looking for and most interested in searching on the Internet. From the survey we found, most of the authors have carried out their work using Machine learning techniques. This is because, these algorithms gave a good accuracy result when compared to other techniques like artificial neural networks, SVM algorithms.[1].

From the past many years, analysis of user has been focused on the intense efforts in marketing applications, buying intention of some online buyers etc. Obviously, the objective of this work is to adopt efficient and some other new specific marketing strategies. And these strategies are based on real time datasets. That is recorded dataset information from the systems. Which includes the past/previous activities of that users or clients? So this can be defined as a data-based behavioural analysis, it because analysis done on recorded data information. This analysis has found its importance in detecting fraud information and fighting against fraud etc. So now, this is not that surprise to see behaviour analysis can enhance information communication technology, detect internal threats like targeted attack, accelerate some repetitive tasks, adapt software's to the users so organize more efficiently production tools etc.[2].

The user model is a representation of single user or it can be a group of multiple users in system. This developed model includes a set of data/ parameters that are representative of the user's previous behaviour. The development of user model starts with system designing which will be collecting all the data information needed for representing the users. User Behaviour Analysis (UBA) is the disciplinary way of analysing behaviour of that user. In an operational way it can be defined as, essentially collecting data, monitoring the obtained data, processing that data for analysing.[3].

The required data sets for work is collected from the users which is history of browsed data are stored in separate files, databases, directories or data log files etc. The purpose of this collection of datasets is a process to provide desired parameters and from this data it is very easy to build usable and reliable models the user. In other words, it will precisely classify the user group and accurately characterize the users. For example, nowadays the Internet surfing has become most privileged space for this type of application.[4].
 Indeed, nowadays technologies are so grown up in every aspects i.e., in order to collect data and then

exploit the present, past and future behaviour of individual users. The three pillars of UBA are: Analysis of data, integration of data and representation of data. The most difficult challenge faced is in analysing and processing the huge amount of data. The analysis of UBA in must be fast in pre-processing huge data of the users. And selected developed ML algorithms should be appropriate to classify the users. Therefore, SVM algorithms must run in real time, so that it will be easily accessing to complete data sets.[5].

II. LITERATURE SURVEY

Md Salik Parwez (2017),et al. says , the next generation wireless networks are expected to operate in fully automated fashion to meet the burgeoning capacity demand and to serve users with superior quality of experience. Mobile wireless networks can leverage spatiotemporal information about user and network condition to embed the system with end-to-end visibility and intelligence. Big data analytics has emerged as a promising approach to unearth meaningful insights and to build artificially intelligent models with assistance of machine learning tools. Utilizing aforementioned tools and techniques, this paper contributes in two ways. First, we utilize mobile network data (big data) – call detail record (CDR) – to analyze anomalous behavior of mobile wireless network. [6].

Mario Manzo(2017), demonstrated a model to investigate and predict the behavior of users, taken to explore the additional knowledge information and predict the learning outcomes, is described. In the first instance, the information are extracted through a suitable tool, and, subsequently, are submitted to an analysis phase. Time series analysis techniques are adopted to detect partial similarities between the navigation data and, subsequently, to extract a classification. Finally, performance are measured through statistical measures to evaluate the goodness of proposed approach and test its significance. The results, obtained on Moodle platform, show that the proposed model leads to accurate outcome prediction about users behavior and can be adopted to improve the learning paths, both in its implementation and design.[7].

Rodrigues, et al. (2013) says that the attention is focused on the importance of stress during the learning process. Stress detection in an distance education environment is an important and crucial factor to success. The estimation of the students' levels of stress in a non-invasive way is performed taking measures to deal with inclusi l'apprendimento a distanzait.[8].

S. Varun , et al.(2024) says that the current research presents a comparative analysis and guided-approach study for fabricating PVDF-based TENG with voltage predictive capability using predictive machine learning (ML) models. In this study, three distinct ML algorithms, specifically Decision Tree Regression (DTR), Random Forest (RF), and Gradient Boosting Regression (GBR), were employed to optimize the fabrication process and improve upon the existent voltage output performance of PVDF nanogenerators. Experimental data was collected for various TENG fabrication parameters, including material properties, configurations, and processing methods. [9].

Md Salik Parwez, et al.(2017) says that the next generation wireless networks are expected to operate in fully automated fashion to meet the burgeoning capacity demand and to serve users with superior quality of experience. Mobile wireless networks can leverage spatio-temporal information about user and network condition to embed the system with end-to-end visibility and intelligence. Big data analytics has emerged as a promising approach to unearth meaningful insights and to build artificially intelligent models with assistance of machine learning tools. Utilizing aforementioned tools and techniques, this paper contributes in two ways. First, we utilize mobile network data (Big Data)-call detail record-to analyze anomalous behavior of mobile wireless network. For anomaly detection purposes, we use unsupervised clustering techniques namely k-means clustering and hierarchical clustering.[10].

III. PROPOSED SYSTEM

In this paper, I presented a system for detecting users' psychological behavior states from users' invites, updates, events, status, etc as well as users' social interactions. Employing real-world social media data as the basis. I studied the inter connection between user's psychological states and their social interaction behaviors. To fully leverage both content and social interaction information of users' tweets. I proposed a probabilistic language model which combines the Content base algorithm and Q-gram technique. Further analyzing this model it detects the stressed users. Based on this the behaviour level of the user is displayed in his/heraccount.
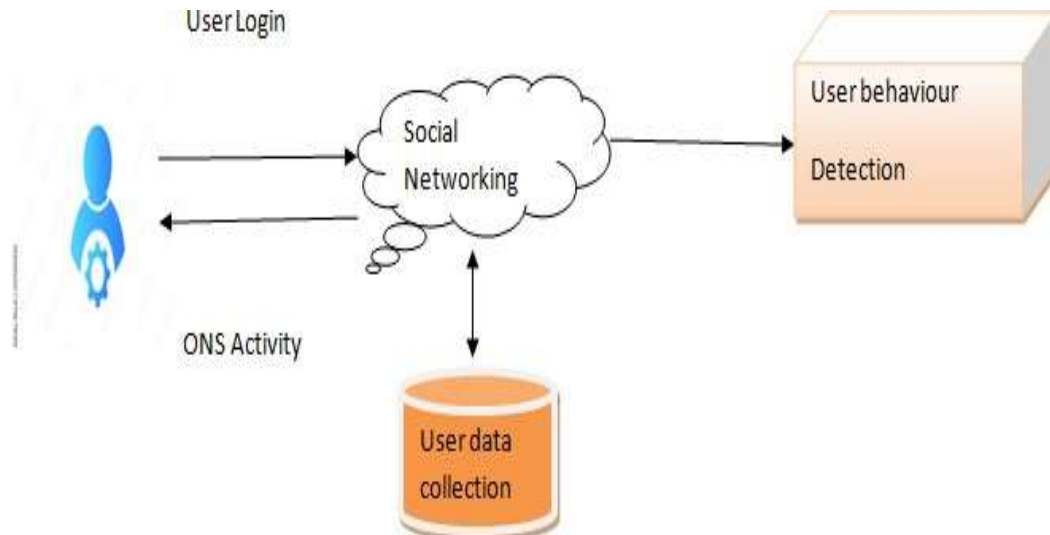
ARCHITECTURE DIAGRAM

Fig 1: Architecture diagram of proposed system

EXPLAINATION

Fig. 1 demonstrates the architecture diagram for the proposed system. . To comprehend the general attitudes contained in the data gathered from various social media platforms, sentiment analysis, also known as opinion mining, is employed. We also evaluate user behavior features and select the transition probability of user behavior on the basis of general behavior characteristics. We then analyze and classify situation-aware user behaviors in social networks using our proposed semisupervised clustering detection method. This is to ensure that the proposed system is not a burden to the company. For feasibility analysis, some understanding of the major requirements for the system is essential.

MODULE DESCRIPTION
1. User
2. Seller
3. Admin

User

The user needs to register with the relevant details. And then login by using the username and password. After logging in, the user can view all files, user can view our product to interest buy the product.. User before buying the products go to view the top rank of the product then the particular to prank product will buy the user. User after buy the product inserts our own review to give the product.

Seller

This Seller module allows the seller to update their product with the admins permission. And the seller can view all the product details.

Admin

This module allows the Admin to login the portal using user name and password. Once the admin login he/she can view all the registered user and their details. Later the Admin activate the account for user account to allow the user module. The admin view to prank products are added to seller and the admin view all review details to the user.

IV. RESULT AND DISCUSSION

Figure 2: User register page

Figure 2 demonstrates the user registration form. The Registration Module holds all the information related to registration. It is responsible for tasks such as user authentication and storing user preferences. It generally contains basic information about the user, such as name, email, password, address, and mobile number.

Figure3: Admin login page

Figure 3 demonstrates the admin login form, which manages the authentication process. This involves validating the provided credentials, such as a username and password, against stored user data. The portal's admin login page serves as a secure door for authorized persons to get to and oversee the data.
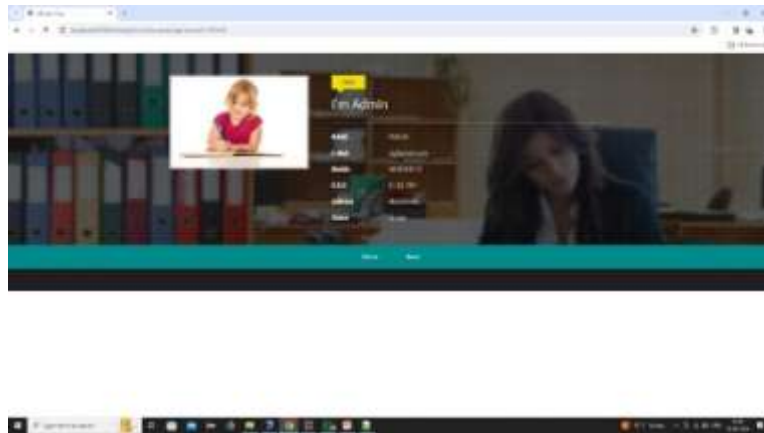
Figure 4: View user details

Figure 4demonstrates the view all user page. This page allows the admin to view all the information about the registered user.

Figure 5: Spam account details

Figure 5 demonstrates the spam account details. This allows the admin to view all the spam account details that were registered.
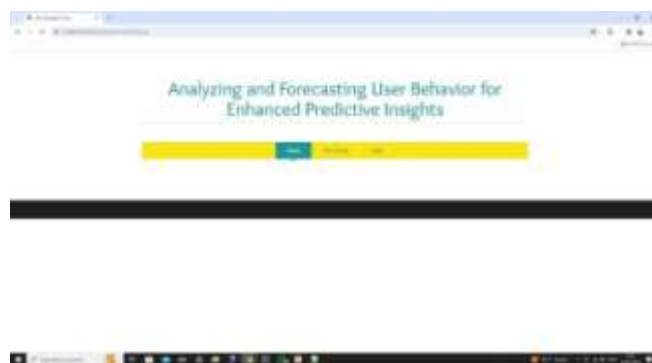

Figure 6: View friend request

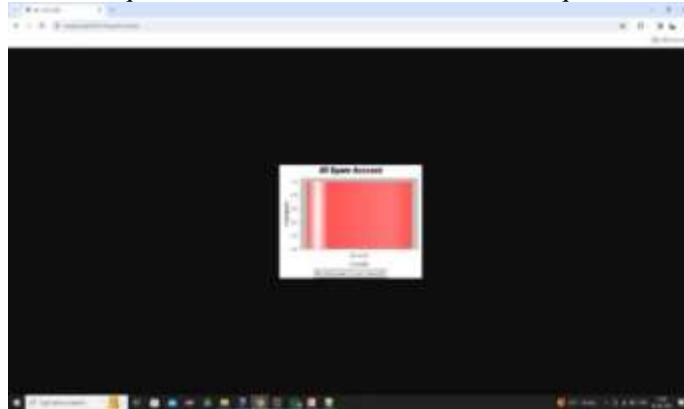Figure 6 demonstrates the friend request. This allows the user to view the requests he or she receives.

Figure 7: Result Page

Figure 7 demonstrates the result page. This allows the admin to view all the spam account details that were registered.

V. CONCLUSION

In this work, with user browsed data are obtained from browsing history viewing tool. Here we model browsed data in reference to social network, entertainment platform, others etc. Through real data analysis, we observe user where that person is most interested. So we developed some of SVM algorithm to classify data. The Proposed models are used analyse and predict the UB from the dataset and then calculate the accuracy of each algorithm developed. The algorithm chosen here are SVM and for clustering the data k means is used. Among these developed algorithms, we got good result for word classifier. It gave accuracy about 93%. In future we will be trying to predict and analyse by considering other parameter for the work. And we will try to compare with other algorithms too. In future other algorithms may give better accuracy performance than SVM Classifier.

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