Predicting Human Behaviour on Social Media Using Expert System Tool CLIPS

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Abstract—**In this Paper, we have concentrated on those study, that point out the Facebook user's interest and disinterest. Many papers have revealed to us how the use of Facebook has influenced individuals' life. For better usage of Facebook in human life, we made an expert system that gives knowledge when people are using Facebook and also finds that what are the main reasons behind deduction with other when they use social networking sites also finds what they really need. This Expert System additionally gives answers for the related problems. CLIPS expert system tool has been utilized for making this Expert system. From our survey, we found that there is a populace that does not know about Facebook and what are the benefits of utilizing it. This expert system acquaints them with the positive side of Facebook too. This expert system can be utilized broadly in numerous regions and ventures.**

Index Terms—**Artificial Intelligence (AI), CLIPS, Decision Making, Expert System, Knowledge - based Expert System Information System, Social Media, Social Networking Sites (SNS), Personal Computer (PC).**

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I. INTRODUCTION

Every single individual uses Social Media for some reasons. In this interest, a few people are getting dependent via web-based networking media and are driving themselves to wretchedness. We utilize online networking's one of the class i.e. long range informal communication site-Facebook. We reviewed more than 200 individuals and found that a specific rate of individuals is utilizing Facebook and others are definitely not. Here, we planned a specialist framework for Facebook utilizing CLIPS (open space programming device for building expert systems) that predicts the discouragement and joy levels of the clients and recommend the answer for the general population who are discouraged and dependent on Facebook. Web-based social networking is one of those expressions that many individuals think they ought to know since it joins two well-known words. You realize what social means. All things considered, individuals are social creatures, depending upon one's capacities to collaborate with and impact others keeping in mind the end goal to survive. As a child, your mom may have instructed you to "go outside and be social." To be social is an alluring thing. Presently take the word media, in a conventional sense; media incorporates things, for example, daily papers, magazines, and TV. While the word media conjures up pictures of news associations, it additionally raises impressions of how the news is conveyed: by means of print, sound, video, and photos. Each is a critical medium used to draw in a crowd of people by recounting a convincing story or sharing the imperative news. You are not the only one in case you're not ready to characterize online networking rapidly and with certainty. In present research it is directed, almost 33 percent of 200 or more respondents were not particularly comfortable with the term web-based social networking. Once more, many individuals think they ought to comprehend what the term implies, yet most don't know.

So Exactly What Is Social Media?

Web-based long range interpersonal communication implies activities, practices, and practices among gatherings of people who amass online to share information, data, and feelings using conversational media. We make a specialist framework for the individuals who think about Facebook and the individuals who are not acquainted with the term web-based social networking. For our examination, we utilize CLIPS expert system tool.

Expert System

A PC framework application that plays out a major role in human life is an expert system. For example, there are Expert systems that are using investigate human illnesses, profit related guesses, and logbook courses for transport vehicles undertaking by others. Some Expert structures are proposed to supplant human authorities, while others are planned to help them.
Expert framework works are a bit of a general class of PC framework applications known as Artificial Intelligence. To arrange a pro-structure, one needs a data creator, a man who focuses how human pros settle on decisions and makes an understanding of the models into terms that a PC framework can get it. Fig. 1 demonstrates the structure of the Expert framework system.
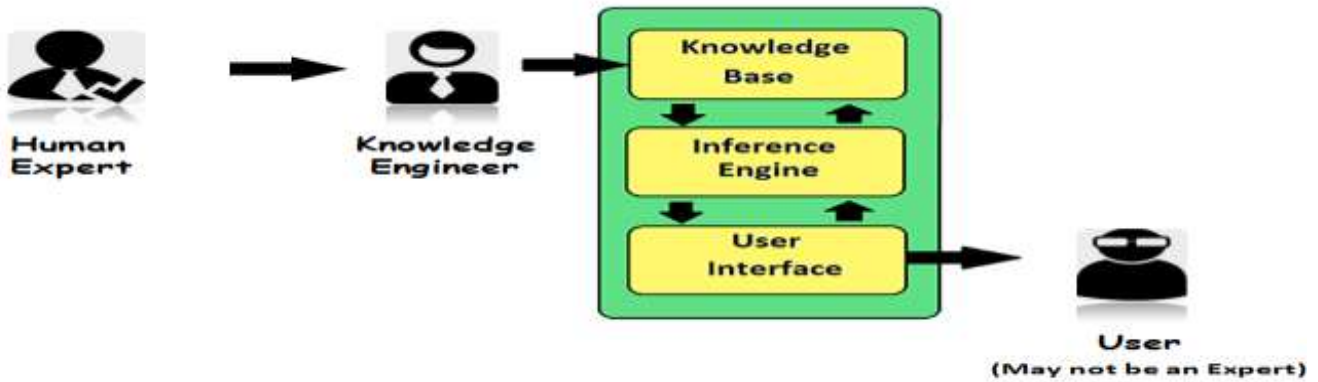
Fig. 1 Structure of the Expert System

Expert System Components

A human expert is a person who has a predominant capacity comprehension of an issue. For instance: a specialist, budgetary counsel, a specialist in auto engines, and so on. A knowledge engineer build incorporates learning into PC frameworks to deal with complex issues normally requiring a strange condition of the human capacity. A user is a person who utilizes a PC or system benefit. Users, for the most part, utilize a framework or a product item without the specialized skill required to completely comprehend it.The components of Expert System are:

1) Inference Engine:

An inference engine is a tool from inference engines and was the primary parts of Expert frameworks. The ordinary Expert framework included an inference engine and knowledge base. The learning base set away reality about the world. The inference engine applies keen standards to the learning base and determined new data. This system rehashes as each new truth in the knowledge base and also helps to trigger additional standards in the inference engine. Inference engines work essentially in one of two modes either exceptional administer or realities: forward chaining and in reverse chaining. Forward chaining starts with the entrenched truths and states new actualities. In reverse chaining, it begins with objectives that work backward to make sense of what actualities must be announced so that the targets can be refined.

2) Knowledge Base:

The Knowledgebase an Expert uses is the thing that he learned at school, from partners, and from years of experience. Clearly, the more experience he has, the greater his store of learning. Learning empowers him to interpret the information in his databases to all in all, blueprint, and examination. A Knowledge base (KB) is a development used to store complex sorted out and unstructured information used by a PC structure. The hidden use of the term was with respect to Expert frameworks which were the essential information based structures. The main use of the term information base was to depict one of the two sub-structures of a learning-based system. An information-based system includes a learning base that addresses facts about the world and a deduction engine that can reason about those substances and use rules and distinctive sorts of justification to close new sureness or highlight abnormalities.

3) User Interface

In the mechanical diagram, the User Interface (UI), is the area of human–computer correspondence, and also is the space where machines associations among individuals happen. The target of this participation is to allow control of the machine and effective operation from the human end, while the machine in the meantime feeds back information that aids the executives' essential initiative handle. Instances of this sweeping thought of UI's fuse are the insightful part of, considerable equipment overseer controls, hand instruments, process controls, PC working systems.

CLIPS

CLIPS is a profitable advancement and conveyance expert system device which gives an entire situation to the development of administer and additionally protest based expert systems. Made in 1985, CLIPS is presently generally utilized all through the administration, business, and the scholarly world. Its key elements are:

1) Information Representation:

CLIPS give a tough apparatus to managing a wide collection of learning with support for three unmistakable programming perfect models: Object Based Programming, Rule based and procedural.
Object Based programming empowers complex systems to be shown as measured parts (which can be adequately refused to exhibit distinctive structures or to make new fragments).

Rule-based programming empowers figuring out how to be addressed as heuristics, or "general rules," which show a course of action of exercises to be performed for a given situation.

The procedural programming capacities given by CLIPS resemble limits found in tongues, for instance, C, LISP, and JAVA.

2) *Portability:*

In C, CLIPS is created for high speed and accommodation that has been presented on different working structures without any changes of code. Working structures on which it has been attempted join Windows XP, Mac OS X, and UNIX. An ANSI pleasing C compiler, CLIPS can be settled down to any of the environment system. CLIPS use all type of programming which can be balanced and exceptionally fitted to meet a customer's specific needs.

3) *Joining/Extensibility:*

Inside the procedural code CLIPS can be embedded and its, called as a subroutine, and this all are composed with tongues, for instance, ADA, C, FORTRAN, and. Java. CLIPS can be adequately extended and increase by a customer utilizing a couple of all around described traditions.

4) *Intelligent Development:*

The standard form of CLIPS gives an intuitive, content arranged improvement condition, including investigating helps, on-line help, and a coordinated editorial manager. Interfaces giving components, for instance distinctive windows, fused editors and pulldown menus, have been created for the X Window conditions, Windows XP, and Mac OS.

5) *Confirmation/Validation*:

CLIPS joins different components to reinforce the check and endorsement of Expert frameworks including allotting of a database, support for measured arrangement and static and dynamic requirement checking of opening qualities and capacity contentions, and semantic investigation of administer examples to decide whether irregularities could keep a control from terminating or produce a mistake.

6) *Completely Documented:*

CLIPS go with expansive documentation including a User's Guide and a Reference Manual.

7) *Minimal effort:*

Open space programming is kept up by CLIPS.

Basic Commands in CLIPS

FACTS: Facts comprise of a relation name taken after by at least zero openings and their related qualities.

The accompanying is a case of a fact:

(person (name "Sohn L.. Public")
(age 25)
(hair-color brown) (eye-color brown))

RULES: Rules can be written specifically into CLIPS or stacked in from a document of rules. The pseudo code for one of the conceivable standards in the modern plant checking expert system is appeared as takes after:

IF
the crisis is a fire
THEN
the reaction is to initiate the sprinkler framework.

Survey Chart:

To check the popularity graph of social networking sites, a dreamgrow name site from where we getting important information. This site gives us the details of the different sites which contain information about numbers of monthly visitors.

Monthly Visitors:

Table 1 shows you the different sites which contain information about numbers of monthly visitors

SOCIAL NETWORKING SITES	MONTHLY VISITORS
FACEBOOK	1,790,000,000
YOUTUBE	1,000,000,000
INSTAGRAM	500,000,000
TWITTER	313,000,000
GOOGLE+	111,000,000
LINKEDIN	106,000,000

Table1 Monthly visitors of social networking sites

Social Networking Sites Popularity Graph:

The Figure 2 drawn between social networking sites and monthly visitors (in millions).It describe the SNS popularity
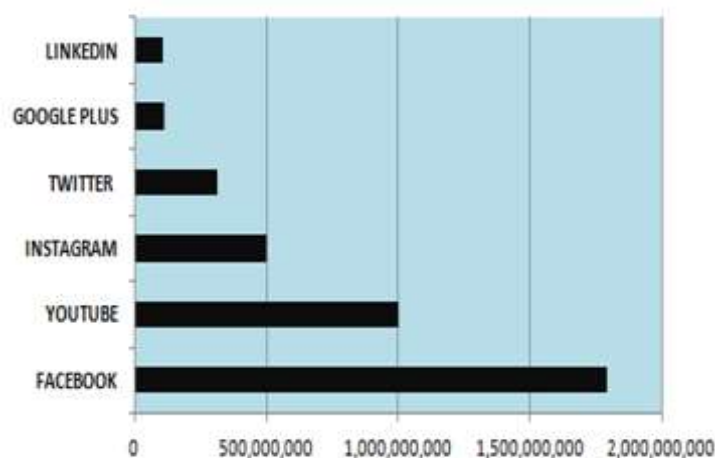

Fig. 2 Popularity Graph of Social Networking Sites

The rest of the paper will be sorted out as takes after: In Section II, we describe related work done in this field and furthermore talk about Facebook utilization. Section III describes methodology used in this expert system. Section IV, shows the result Section V is all about the conclusion.

II. RELATED WORK

In this area, we highlight related work influence and advantages of Facebook utilization and artificial intelligence framework part in human life.
[1] For a moment, the disclosure of Artificial Intelligent (AI) innovation framework can be a major degree; since it comprises lead based expert system, outline based expert system, neural system, genetic algorithm, fuzzy logic and so forth. Since 1970 for the better life and to upgrade the execution of individuals work exercises AI revelations were exceptionally useful. Presently, we have a ton of expert system and the machine is accessible in all around .There generally utilize this apparatus in industry zone and business. In the field of medicals, militaries, science, building, assembling, administration, and others AI accomplished more well-known application. Facebook has spread everywhere throughout the world; it gives much usefulness to the client in the field of stimulation, training, business and a great deal more. Individuals make a companionship with others whether they are known or not on account of they are rewarding. [3]In this interest, it is found that connections installed in various gregarious circles are more obligated to come full circle if companions vary an extreme measure of in age or on the off chance that one of them is hypochondriac or withdrawn. Ladies slanted to unfriend their SNS companions more than men do. Of ladies, 67 % verbally communicated they have erased somebody from their system, contrasted and 58 % of men. Besides, more ladies utilize security settings to defense their private data. [4] Talk about various reasons, sorted as on the web and disconnected. The most sizably voluminous number of study respondents (55 %) noted they unfriended previous companions for online reasons. Among the most elevated scores of online purposes behind unfriending are trifling points (62 %), infelicitous themes (36 %), and posting recurrence (33 %). [4] Found that 28 % of overview respondents unfriended some SNSs companions in replication to disconnected offices. Disconnected purposes behind unfriending included identity (70 %), comportment (62 %), and wrongdoings (57 %). People who verbalized they unfriended another used for disconnected reasons betokened they misprized a companion's specialization or had encountered a change in the relationship, signifying a geographic movement or a sentimental relationship's end. As opposed to people who have penned each other quickly, individuals who have kenned each other for quite a while are more at risk to unfriend each other because of extreme posting on regularly polarizing themes. As the length of a dyadic friendship builds, the probability for referring to disconnected reasons as foundations for unfriending (e.g., wrongdoings, misprizes, and so forth.) increments also. At the point when Facebook clients are unfriended by somebody, they slope to translate the unfriending go about as negative [5] and as an anticipation break.[6] Facebook postings that put a strain on the relationship, or messages that cast a shadow on the beneficiary or uncover scorn for different clients are related with the aim to unfriend a sender. In advisement, when somebody sends announcements debilitating the collector's idea of self and assurances, the last's plan to unfriend the sender develops more lively. However the demonstration of unfriending can be created by true world occasions and also those in the advanced world. [13]There is by all accounts a refinement between making companions and building harmonies in the physical world, nonetheless, contrasted and doing as such in the advanced circle (e.g., Facebook).Amities on Facebook, or when all is said in done on SNSs, frequently speak to impuissant ties between individuals.

III. METHODOLOGY

Proposed System

The proposed system performs many functions. In this section, we present the questions, model, and the methods for our research. A user-related concept for answering these questions by self-assessment has been developed. Our study aims to discover and investigate Facebook user's self-perceptions of their information literacy levels. We ask several questions: are you spending more time on Facebook? Want to minimize your time on Facebook? Are you happy with your daily routine on Facebook? Want to improve your daily usage of Facebook? Want to know the human well-being by using Facebook? After this, it will close the human prosperity in view of answers of the client to particular inquiries that the framework asks the client. The inquiries give the framework to clarification of the joy or melancholy level of the client. It stores the actualities and the finishes of the derivation of the framework and the client for each case in the database. It helps the Expert framework to begin the ideal arrangement by derivation engine. It forms the database keeping in mind the end goal to concentrate rules, which finish the information base.

Conceptual Modeling

In demonstrating expert systems knowledge base there are distinctive displaying methods; one of them is Decision tree. It is utilized as a part of various settings to arrange and order information for applied displaying. They are the bases for the Expert System improvement of Facebook. The Expert System takes after indistinguishable methods from introduced in the choice tree when diagnosing system issues .The decision tree structure shown in Fig. 3
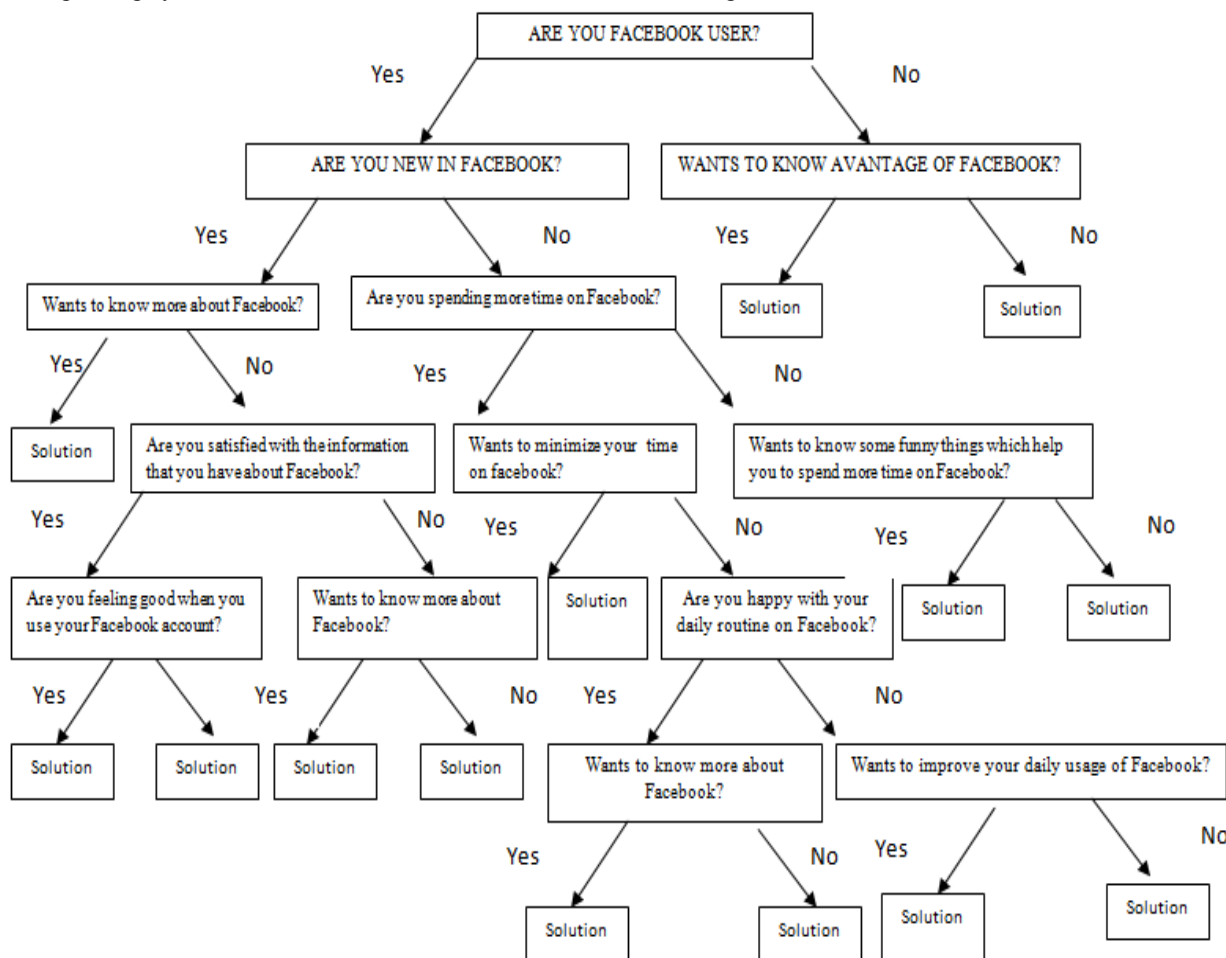

Fig.3 Structure Of Decision Tree

IV. RESULT ANALYSIS

According to the survey Fig. 4 shows out of 200 people, 167 of them were facebook users and 33 of them were not using Facebook. In Fig. 5, when asked about the time of using facebook, 97 users were found to be using facebook on hourly basis on different days, 31 users were using.
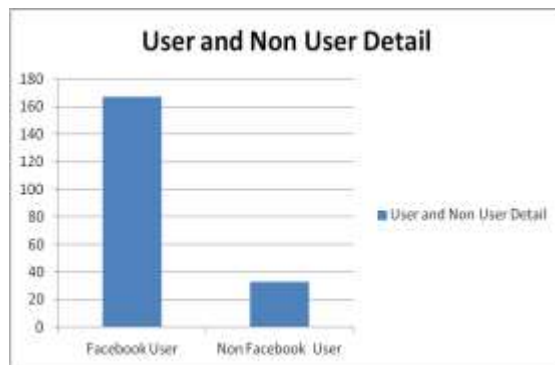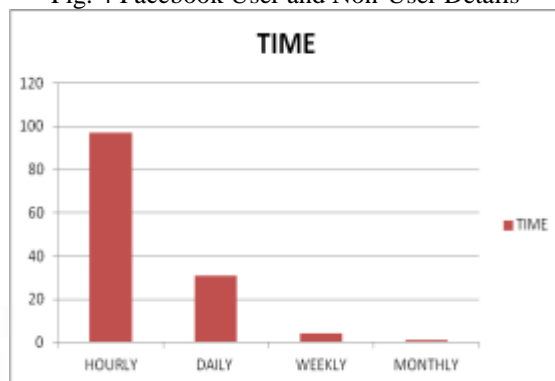
Fig. 4 Facebook User and Non-User Details

Fig. 5 Time Spending on Facebook

Facebook daily, 4 users used facebook once a week and 1 user was found to be using facebook once a month. Figure 6 shows the outcome of feedback received. Here 147 users gave a positive feedback followed by 20 giving a negative feedback.

Fig. 6 Positive and Negative Feedback of User

V. CONCLUSIONS

In this research, we altogether studied the research papers related to Facebook and focal points and in addition burdens identified with Facebook. Many research papers tell us how usage of Facebook has affected people's life. The study also explains if people are happy while using Facebook or are having depression issues keeping all these scenarios in mind we created a expert system that could provide insight about what people are think and what they actually want. This Expert system also provides solutions to the related problems. CLIPS expert system tool has been used for creating this Expert system. There is also a population that does not know about Facebook or the advantages of using Facebook, this expert system introduces them with the positive side of Facebook as well. In this paper, we exhibited a contextual analysis of a specialist framework called Facebook expert system for online networking clients. From client's perspective, we made a specialist framework, more intelligent and more helpful to utilize. Presently, with this framework we can have better proficiency, better profitability, better adequacy, and better participation. These are heading to a superior personal satisfaction and learning. The use of expert system in online networking is exceptionally fascinating and has made impressive vital frameworks. The proposed system can help online networking clients in giving choice emotionally supportive network, intelligent preparing instrument and Expert exhortation. The insightful framework

finds whether online networking clients are in sorrow or not. An underlying assessment of the expert system was finished by online networking Expert and client. Various clients tried the framework and gave us a positive input and requesting that we grow the expert system. For future scope, this expert system will cover more data and give better appealing interface.

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