

# Study on emotional sensitivity on social media influencing behavioral issues using Internet of Behavior (IoB)

Prof. Amar Shinde<sup>1</sup>, Dr. Maithili Arjunwadkar<sup>2</sup>

<sup>1</sup> *Suryadatta Institute of Management and Mass Communication (SIMMC), Pune*

<sup>2</sup> *Modern Institute of Business Studies (MIBS), Pune*

(E-mail: amarslives@gmail.com)

**Abstract**—While spending more time on social media can negatively affect a person's behavior, studies on social media frequently overlook the specific actions users take while they are online. In this study, we aim to explore the connection between using social media and emotional and behavioral problems by employing IoB techniques. Internet of Behaviors (IoB) is a branch of the Internet of Things (IoT) that can develop patterns to affect people's behavior. This subject merges three areas: technology, data analysis, and the study of human actions. The blend of IoT and IoB has a strong influence on how people act, making it a key area for future research into social patterns and behavioral problems. IoT and IoB are interconnected, IoB technology collects and analyses data depending on user activity measuring active and passive social media behavioral styles and investigates whether and how these two social media behavioral styles are related to depression, anxiety, and stress, and the mediating role of emotion recognition ability in this relationship. The Internet of Behavior can forecast future patterns in how people act and potentially alter those actions to make life easier for us. The research looks at key aspects that a person goes through while using social media. This paper suggests ideas based on previous studies and research into how emotions affect behavior.

**Keywords** - (IoB) Internet of Behavior, (IoT) Internet of Things, Behavioral issues, emotional sensitivity.

## I. INTRODUCTION

There's often an emotional price when one feels highly sensitive to social media stimuli. Many users of social media report feelings including unhappiness, envy, insecurity, rejection, vulnerability, and depression. Some studies conclude that social media may have an especially adverse emotional impact on women. Today social media has become an integral part of nearly everyone's social life. Social media is also used as a second screen while watching sports or advertisements on TV. Using structured observations, in-depth interviews, the researchers discovered that sports viewers connect and interact on social media; they use Twitter for interactions, Facebook for private interactions, and Instagram for personal pictures and

Pinterest for trendy and stylish pictures. This paper reveals how social media impacts people's emotional quotient on behavior patterns and how best to manage both the positives and negatives. It is no surprise that social media has created a huge impact on the individual's lifestyle, given the ever increasing rate of its widespread use in the contemporary world of digitalization. With toddlers being skilled in the know-how of mobile phones and tablets, to school and college students' dependence on social media platforms for socializing, to adults (and even older adults) employing social media to expand their personal as well as professional growth. Given such a surge of technological conquest within each individual's daily life, the IoB factor based on digitization factor can be used to explore the behavioral issues of people and use it for societal betterment.

## II. LITERATURE REVIEW

A review of relevant literature will assist in comprehending the connection between social media and emotions, which can be further classified into positive emotions, negative emotions, depression, and anxiety associated with social media. Historically, numerous researchers have displayed strong interest in examining how social media affects a person's emotional stability. This section provides a concise overview, the results and recommendations. Although there is a wealth of research on the topic, this review provides an overview of the most recent studies. The review of literature on the current subject is important because it provides a foundation to define the problem and explore research areas.

### A. Vogel et al. (2015)

He investigated how social comparison orientation relates to Facebook usage and adverse psychological effects. The scientists carried out two investigations. In Study 1, a correlation approach was employed, showing that individuals with a high (compared to low) social comparison orientation demonstrated greater use of Facebook. Study 2 employed an experimental method and demonstrated that individuals high in social comparison orientation experienced worse self-perception, diminished self-esteem, and a more negative

emotional balance compared to those with low social comparison orientation after participating in brief social comparisons on Facebook.

### B. Maintaining the Integrity of the Specifications

Bruggeman et al. (2016) examined the impact of digital media on the psychological well-being of children between the ages of 9 and 12. Data was gathered from 13,871 students across more than 163 primary schools in the province of Antwerp, Belgium via a questionnaire that included 72 questions utilizing a 5-point Likert scale. Data was gathered to evaluate subjective wellbeing regarding Happiness, the use of digital media by Frequency of use and the Reasons for engaging with social media. It also included extra inquiries about Facebook usage and their social connections - both online and disconnected. The findings indicate a direct, yet notably weak connection between the use of digital media and psychological well-being. It was determined that among the particular group of children with a Facebook profile, the use of Facebook had only a modest connection to psychological well-being. On the other hand, the offline social network proved to be significantly more effective. The article examined the current ways children utilize social media and their potential future usage, which could yield both positive and negative effects. One potential benefit is that children who are introduced to digital media early may learn to navigate it from a young age, potentially making them more resilient to negative impacts later in life, including internet addiction. Conversely, it could also be assumed that a starting age that is too early for Excessive use of digital media, akin to alcohol dependence (Gruber, DiClemente, Anderson, & Lodico, 1996), was anticipated to result in a long-lasting habit over time.

### C. Bashir and Bhat (2017)

In their research paper titled "Effects of Social Media on Mental Health: A Review," examined the impact of social media on mental health, with a particular focus on young children. Their research showed that the younger generation is at risk. Younger individuals are in a developmental phase of life and face an increased risk of significant mental health issues. The research aimed to determine the connections between the use of The relationship between social media and mental health, which established the importance of the subject. The issues recognized included online harassment, depression, sexting/texting, stress, fatigue, loneliness, a decrease in intellectual capabilities, emotional suppression, and a lack of focus. The younger generation experienced these negative feelings, which affected their mental health either directly or indirectly. The review article also proposed methods to minimize the risks linked to social media use. Recommendations included implementing awareness initiatives, establishing an age restriction for using social networking platforms, and holding counseling sessions for younger kids.

### D. Hunt et al. (2018)

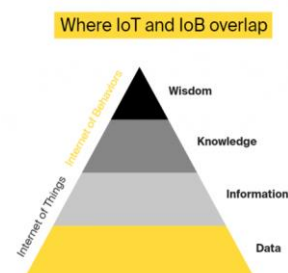
They carried out an experimental study to explore the possible causal relationship between social media use and a decline in well-being. The research involved 143 undergraduate students at the University of Pennsylvania to assess their mood and well-being in connection with their social media activities. To accomplish this, screen captures of a week's social media interaction via their smartphones were utilized as data for the research. The researchers discovered that the group that utilized social media sparingly experienced a notable decrease in feelings of loneliness and depression over a period of three weeks in contrast to the control group. Both groups exhibited a notable reduction in anxiety and fear of missing out compared to baseline, indicating an advantage of enhanced self-monitoring. The study's results indicated that if social media use is confined to around 30 minutes daily, it could result in a notable enhancement in well-being.

## III. TECHNOLOGY BACKGROUND

Recent technologies are changing the ways we live and work, with progress in fields such as Artificial Intelligence, the Internet of Things, and 5G. These technologies are fueling innovation in multiple sectors, including healthcare and transportation. These technologies are not merely standalone developments; they are frequently linked and utilized together to generate even more effective solutions. For instance, AI may analyze data gathered by IoT devices, while 5G can facilitate quicker transmission of this information. As these technologies advance, they are expected to transform industries and society in significant ways. Here in this section we will see brief of these technologies which is basis and foundation for this research conducted.

### A. Understanding IoT

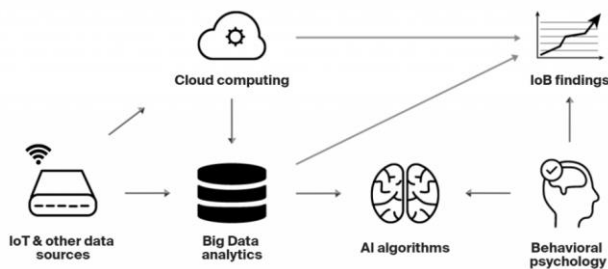
The Internet of Behavior builds upon the Internet of Things (IoT), which is the connection of devices generating a wide range of new data sources. This information could be tailored to you as a customer—information you've shared via a company's app. However, increasingly, businesses are collecting non-customer data by "sharing" among interconnected devices. One device, such as a smartphone, can monitor your online activities along with your physical location. It's easy for businesses to connect your smartphone to your laptop, your in-home voice assistant, your home or car cameras, and possibly your cell phone records (texts and calls). All of a sudden, people can learn much more about you—your hobbies, aversions, and voting preferences.



### B. Technologies driven Internet behaviors

The Internet of Behaviors combines different technologies, like the above-mentioned IoT, as well as AI, data analytics, and cloud computing, with behavioral science

How different IoB components interact together



### The Internet of Things (IoT)

McKinsey describes the Internet of Things as a system of tangible items equipped with sensors and actuators. They interact with one another and/or a central processing unit, along with cloud-based or on-site servers, through a wired or wireless link, enabling the central hub to oversee and potentially manage items within an IoT setup. IoT devices collect and evaluate user data, then display it in an accessible format.

### Machine intelligence (MI)

AI denotes intelligent algorithms capable of reasoning similar to humans, making choices, and executing tasks that are thought to necessitate a human-like intelligence. The Internet of Behaviors employs AI to identify and examine various behavioral trends in consumer data.

### Large-scale data analysis

This technology is crucial if you aim to manage substantial amounts of structured, semi-structured, unstructured, and other intricate data types, as conventional data management methods would be inadequate.

### Cloud technology

Cloud computing refers to the immediate availability of computing resources over the Internet. This encompasses hardware resources, like servers and data storage devices, as well as software assets, including applications, development tools, and more. All of these are hosted off-site and overseen by a cloud service provider.

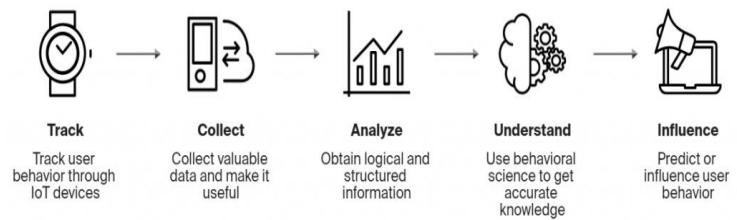
### Behavioral science

Behavioral science is a field that examines human behavior via experimentation and observation. Its goal is to clarify the reasons behind people's behavior.

In the realm of the Internet of Behaviors, this area of research assists companies in comprehending why individuals purchase specific items, how they engage with websites, and additional

aspects. Behavioral science examines various aspects, including motivation, habits, social influence, and more, to understand the reasons for human behaviors.

IoB workflow at a glance



### C. Constraints

Although it has advantages, technology also possesses certain constraints. It has heightened reliance on technology, several factors contribute more to it. Excessive use of devices may result in social isolation and distractions. It has also led to privacy issues, including cybercrimes and hacking. Moreover, the inappropriate use of technology for harmful objectives is a significant concern.

Here we will highlight most important factors.

#### Safety

Handling sensitive and real-time data consistently raises security issues for every service user. In IoB, it is crucial to ensure a strong level of security and protection for users, since their behavioral data is likely to be vulnerable to attacks. The sensitivity of the data drives cybercriminals to infiltrate, disclose, gather, and exploit it.

#### Ethical Utilization

Behavioral data is a personal and sensitive type of information, so its gathering, storage, or analysis should be conducted with transparency and ethical considerations. Users have the entitlement to understand this process and to be assured that their privacy is safeguarded and shielded from abuse. Another facet of ethical usage is not adhering to the notion “the end justifies the means.” Businesses generally seek higher profits without considering the effects on users when altering their behavior in essential areas like health. Finally, organizations need to guarantee that users' permission is secured when their information is gathered and utilized for any reason.

#### Ostrich Phenomenon

The ostrich effect is a phenomenon where the rational mind recognizes something as significant while the emotional mind anticipates it to be hurtful. Individuals comprehend

The advantages and potential of utilizing IoB are significant, yet individuals may feel uneasy (trust concerns) regarding the tracking system, leading them to avoid or decline its use. As a result, when organizations adopt IoB, it is insufficient to focus solely on users' understanding of processes. They must also focus on alleviating the unease associated with utilizing this technology.

#### IV IDENTIFYING INDICATORS

##### *Social Media, Behavior and Sensitivity*

Regrettably, in our quest to relax and de-stress, we expose ourselves to increased overstimulation and the adverse impacts of social media—such as dependency, diminished self-worth, and an illusory feeling of connection, among others. Even though we feel worse, it's difficult to detach ourselves from our screens. As Highly Sensitive People (HSPs), we are especially susceptible to adverse effects from our reliance on the digital realm. What appears to be an easy method for unwinding and escaping the pressures of our existence can result in increased overwhelm and emotional fatigue

##### *What Effect Does Social Media Have on Us?*

It's too stimulating.

As Highly Sensitive People, our minds are attuned to detect nuances and subsequently engage in profound processing of all the information we encounter daily (which is significant!). This indicates that we easily become overstimulated (our weak point), which may manifest as anxiety, irritability, trouble focusing, headaches, or various other unpleasant sensations. Social media contributes to the vast amount of information our minds must process, generating increased stimulation. What we truly require is a refreshment pause in those calm times to be with ourselves!

It Activates our Compassion.

As HSPs, we possess more active mirror neurons and emotional areas in our brains, granting us an enhanced ability for empathy and emotional engagement. Whenever we encounter a story that evokes emotions, whether regarding a person, an animal, or an injustice, we react emotionally. In just moments, we can shift from casually browsing Facebook to being overwhelmed with tears. When we're feeling stressed and fatigued, social media is unlikely to help us relax but may actually worsen our distress.

It Generates Fear of Missing Out.

If you do not know the FOMO acronym, it represents "Fear of Missing Out," a frequent feeling for Introverts and Sensitive individuals. When observing your friends and acquaintances on social media, it seems like everyone is enjoying themselves constantly. This story of "we're insufficient for not accomplishing enough" is one we recognize very well. We frequently skip events due to feeling burned out, drained, overstimulated, or stressed. Rather than trying to accomplish everything, it is crucial that we choose carefully and adopt a "quality over quantity" mindset. Embracing the "Joy of Missing Out" enables us to appreciate the activities we select to participate in. As we are wired in distinct ways, our requirements vary, yet the comparisons prompted by social media can hinder our ability to keep that in mind.

It Calls Upon Our Conscience.

Regardless of our beliefs, we often exhibit high levels of

conscientiousness and a focus on justice, which can lead to complications on social media, where achieving a balanced dialogue can seem nearly unattainable. You might have encountered situations where you became engaged in a dispute with a "troll" or were upset by someone's harmful remarks. Alternatively, it might be beneficial to channel this energy into volunteer efforts or other selfless activities where we can create a difference without the emotional and physical exhaustion on our already constrained abilities.

Here are some indicators derived that you are significantly sensitive to social media.

Although many individuals may occasionally encounter some of these signals, a person who is very sensitive to social media will probably "feel too frequently" and "feel too intensely" while scrolling through their feeds. Certain people might be particularly responsive to only one or two stimuli, whereas others could be significantly influenced by several from the list:

- Frequently encounters negative feelings and thoughts while surfing the web.
- Frequent concerns about others' opinions regarding your posts.
- Is worried about facing rejection, like being ignored by others, not receiving "likes," or getting negative comments on your posts.
- Frequently evaluates oneself against others while browsing, leading to feelings of unhappiness due to unfavorable social comparisons.
- Frequently experiences envy or jealousy regarding how others "show off" their enviable lifestyle.
- Frequently experiences frustration over social media posts that appear unfair, irritating, or just bothersome.
- Experiences physical sensations (e.g. stress, tension, anxiety) while navigating online.
- Interprets others' posts or their reactions to your posts as personal attacks (e.g., "they're just trying to show off to me!" or "they intentionally didn't click 'like!'").
- Keeps checking social media, even if it leads to feeling distressed.
- Experiences persistent discontent regarding what you viewed on social media, even after going offline.
- For numerous highly sensitive individuals, the essential approach to handling oversensitivity involves employing emotional and sensory immunity techniques to effectively soothe and reduce over-stimulation. For individuals who interact with highly sensitive people, having strong communication skills is essential to build positive and constructive relationships.

#### IV. PRACTICE

The study adopted a descriptive research design in order to accomplish examining the relation between emotional sensitivity and behavioral issues on social media usage and to segment the factors so identified.

The present study seeks to establish the link between the social media, emotional sensitivity and its impact on behavior further to segment the respondents based on the factors so identified. To examine the impact of social media usage and further segmentation of the target group as per various criteria like age, race interests etc. helps in studying the subject more accurately.

The points of focus for the study were to identify different factors that led to the interpretation of outcomes:

*a) Emotional reactions to likes and comments influence how often users post and alter their content on social media.*

Based on our research employing mobile devices as IoT tools, emotions influence how social media interaction affects the frequency of posts and alters their content. We discovered that users experienced excitement and eagerness when they received more engagement than anticipated, while they felt sad and disappointed when they received less than expected. Concerning posting frequency, the interval between posts decreased when users experienced excitement and enthusiasm due to receiving more likes and comments than anticipated.

*b) Utilization of social media and emotional as well as behavioral results in early age*

This element illustrates the connection between social media usage and mental health results through individual-level assets. A distinct link can be observed between prolonged social media usage and mental well-being, based on data gathered through electronic devices. We analyze the connection between social media usage and emotional and behavioral results for individuals under 18 years old. Data was also utilized from the Youth Survey in the longitudinal research Understanding Society to analyze individual-level variation. Findings show a varied scenario, where restricted time on social media has no influence on most emotional and behavioral outcomes (and may even enhance social relationships), whereas there are significant adverse effects on individuals who spend increased time on social media.

*c) Character attributes on platforms for contribution such as discussions, etc.*

Anger, Fear, and Ego serve as the emotional foundations for online actions. Individuals who are angry are also disproportionately represented in discussions between those with opposing opinions and from different social or ethnic groups. This requires that in online debates, anger plays a greater role in creating an angry tone during discussions, where each side of the argument gains affirmation from those who think similarly and is excited, not calmed, by opposition from the other side. Unexpectedly, we discovered that there was no connection between fear and the likelihood of participating in online debates.

Concerning the informational aspect, ego seems to fuel anger by prompting efforts to find information that validates existing beliefs. Since anger hinders the pursuit of information, it can lead to media consumption that largely features similar and biased messages, potentially increasing individuals' anger (Weeks, 2015). Nervousness and fright. Our study establishes that the relationships between anger and fear, as well as online behavior, are separate, highlighting the importance of analyzing these two emotions together, despite their strong correlation.

Additional emotional aspects include:

*Emotions:* Their encounters, responses to posts, sadness from overuse, annoyance, etc. result in emotional instability.

*Time Invested:* duration of time utilized, frequency of visits, and individual preference on social platforms.

*Obsession:* This aspect encompasses the impact of social media on a person.

*Alternate Activity Participation:* how often a person engages in outdoor games or cognitive activities instead of using social media. These actions aid in soothing and revitalizing a person's mind.

*Stress reliever:* This element indicates how often social media impacts the alleviation of an individual's stress.

Anger and fear have not been extensively examined in relation to digital politics before. Nonetheless, the results correspond closely with expectations derived from the existing literature on emotions and political behavior; anger is linked to risk-taking actions. Considering the unique advantages of the digital realm, including scalability, searchability, and unseen audiences, engaging in online debates carries several risks. According to the literature, it is not surprising, yet still significant to note that angry individuals are disproportionately present in online discussions.

*Social media and mental health: Satisfaction or Enjoyment*

Human beings possess a powerful urge to bond with others mainly to express their feelings. Emotions hold a crucial importance in relationships, whether they are real or online. The growth of social media accelerates the sharing of emotions more rapidly. Social media is created to promote and support social interaction. Individuals who appreciate these virtual interactions experience numerous advantages for their mental and emotional health. Individuals who dedicate more time to Facebook or any social media often accumulate numerous strangers who evolve into close virtual friends. Therefore, social media promotes connections while also encouraging the habit of comparing oneself with others. This comparison leads individuals to believe that others enjoy superior lives, resulting in a decline in their emotional well-being. The feeling of connection with others fosters joy in relationships, whether in person or online. This feeling of connection enhances the unity in a relationship, which subsequently results in intense levels of joy and enjoyment. Joy does not originate from one source; rather, it results from

a blend of diverse positive feelings combined with the brain's ability to generate pleasure through its pathways.

Since humans are social beings, they pursue both pleasure and happiness. Pleasure is a fleeting sensation of temporary happiness that is always felt on the outside, e.g., the satisfaction of tasting a unique flavor of ice cream, earning gains in stock markets, etc. Not only does pleasure have positivity but also pain accompanying it because it cannot last long. Happiness is the final objective of any existence and is a self-contained internally felt attainment. Happiness is the condition of harmony with no-conflict and it is primarily a result of firm and close relationships.

- A. The nature of happiness and pleasure changes with the subjective feelings of individual users in an internet platform. Happiness and pleasure degree is based on the efficiency of social interaction, which stimulates the feel-good chemical hormones available in the brain. Human beings adore being in society and in order to experience social activities better they need social skills, relationships, interest in relations and social pleasures. Any action which is done in order to obtain social pleasures such as making them visually presentable, grooming, caress, seeking rewards or feedbacks and the worth they hold for the relationship. Social media sites have inherent abilities to obtain social pleasures in virtual space, which make users self-present and communicate pleasing and attractive. Social media communication and its relation to emotional well-being can be positive and negative. Positive association promotes more virtual friendships while negative associations result in reduced self-esteem levels due to social comparison. Textual communication and subsequent causal conversation does not influence the well-being of a person while personalized and intimate conversation in users in relationships anticipates the difference in standards of well-being. Social media sites hold constructive usefulness in promoting wholesome relationships that match healthier emotional well-being. The feeling of happy-ness is a normal phenomenon in the life of any human being. Happiness in a human being makes him or her more social and energetic. Happiness levels that are not restricted to transient delight can result in long-term subjective and emotional well-being. Social media communications that support healthy endorsement paired with equal engagement always aim towards harmony. It helps in the ideal emotional well-being of a person leading to pleasure and delight without causing pain.
- B. The impact of social media communication on emotional well-being of an individual is only dependent on the user. Sense of connectedness and more intense intimacy levels in virtual relationships support flawless well-being. Yet social comparison or any such things giving rise to defects or aberrations in relationships can damage the emotional and subjective well-being of the individual.

*Social media & technologies' effect on the emotional life of users.*

We saw that emotions are in themselves attuned to the wellbeing behavior of users, and that the emotional potential of it imply that our digital well-being is particularly vulnerable if these potential are used. To comprehend the impact of emotional affordances was the initial step in moving theoretical understanding forward as to how the design of technology is connected to the emotional life of users and to their digital well-being. Most ethical debates about social media are about their behavioral possibilities but must respect the potential of emotional asset, if they are going to design in harmony with digital well-being. Negative emotions' significance in digital well-being will persist to be overlooked if they fail to concentrate with the future digitization and technologies. Pinpointing digital well-being comes with benefits since such a focus allows us to account for the social media resources, emotions, and well-being in a better way.

## V. OUTCOME

There is a relationship between negative emotions such as worry, depression and anxiety with the factors of emotions while using social media such as feelings & expressions, time spent, activities and stress relaxant with affects the behavior of a person browsing or using Social media.

## VI. LIMITATIONS

The findings of the study can be implemented taking into consideration the following constraints. Data was gathered from range of sources such as Internet, review articles, research papers, articles, blogs etc. which is secondary data source. The study has been conducted on the impact of social media in its current shape, which is altering dynamically because of emergence of new technologies. The current study data drew upon IoB to capture emotional experiences a social media user can experience depending on the aspect of social media use in terms of how he feels or how long he spends and if he views usage of social media as a source of stress relieving. There could be other reasons, which could possibly co-relate with other facets of behavior and psychology of a person when they utilize social media that have not been discussed in this research. A comprehensive study, especially keeping in mind any particular facet of the human psychology could perhaps be regarded to study the impacts. The current research takes age and occupation into account only as demographic variables; perhaps there can be other demographic variables which could significantly contribute to the study of social media usage and its implications. Social media usage could be researched in other respects too, especially video games and their contribution towards teens and youth, which can have short term and long term physiological impacts as well as violent thinking. One significant limitation of the current research is the use of secondary source data. This would necessitate the cross sectional descriptive study. Another issue is that selection biases could have operated in regard to those particular respondents that studies used.



## VII. CONCLUSION

The main aim of this research was to find out the influence of use of social media on emotion that influences people's behavior. It comprised negative emotions like concern, melancholy and trepidation jealousy etc. Lastly, people were classified on the basis of emotional characteristics uncovered by the research. A detailed literature review was carried out through the examination of different studies conducted previously. Different dimensions of the psychological transformation of a person as a result of the use of Social Media was explored. It is inferred that there are five significant factors a person experiences while using social media - feelings, time consumed, addiction, other activities and stress reliever. The terminology of the factors is done in context with use of Social Media. In addition, these usage factors of social media were treated as independent variables and negative emotions (worry, depression and anxiety) personal experiences in life were treated as dependant variables, the factors were also employed to segment the respondents. The respondent segments were labeled as sensitive, balanced emotions and fanatical emotions. The analysis was able to execute segmentation of the participants into three emotional expression-based segments while utilizing social media. It can finally be said that there are various views of utilization of social media for an individual, with varied emotional expression that influences behavior.

## VIII. FUTURE SCOPE

The research results of this study show that people are extremely active on Social Media. Ideal studies of the psychology of a person during social media usage is a significant topic. It will assist businesses to target their audience with ease and sell certain types of products or services needed by an individual. But from a personal perspective, staying updated continuously on social media, although potentially relieving stress, can lead to mental and physical diseases, as well as imbalance of the emotions in the long run. From a research perspective, it provides sufficient room for conducting more research in a concerned area of study. Rather than concentrating merely on the ill effects of social media, one can surely explore the positive aspects of it as well. This will make it possible for a researcher to research the subject in a meaningful manner. The research can also consider analysis of people's behavior on social media platforms that shall offer insights to companies attempting to market their products or services online. There also needs to be further research to take into account possible variables like social networking site weariness (Shuai-lei, 2018) and the quality of sleep (Xanidis and Brignell, 2016), and moderators like effortful control and mindfulness (Shuai-lei, 2018). Experiments can also be conducted to determine more credible arguments regarding how (or why) and when social networking addiction results in other responsibilities being neglected. Such connection between social media usage and mental well-being or psychological conduct would most likely be mediated and/or moderated by, for instance, indicators of school climate or community or workplace environment. This is the inference one reaches since the segmentation of social media users into

three groups is founded upon the five factors that were identified, namely, emotions, time spent on social media, obsession with social media, other activity involvement and stress buster. The outcome of cluster analysis has followed all the assumptions and has also obeyed all the rules of validation. The researcher has found that there are five significant factors of use of social media, i.e., feelings, time used, obsession, other activity involvement and stress buster. The research further came out with a profound influence of two usage factors of social media, i.e., emotions formed as a response towards the use of social media and time spent on the social media leading to negative emotions like concern, depression and nervousness which in turn gives rise to emotional imbalance. The users are primarily divided into three segments on the basis of their emotional expression when using social media namely sensitive, balanced Emotions and Zealous Emotions. The responses can thus be termed to be generalizable across regions.

## REFERENCES

- [1] A review on sentiment analysis and emotion detection from text Pansy Nandwani<sup>1</sup> · Rupali Verma<sup>1</sup> Received: 6 April 2021 / Revised: 25 June 2021 / Accepted: 10 July 2021 / Published online: 28 August 2021 © The Author(s), under exclusive licence to Springer-Verlag GmbH Austria, part of Springer Nature 2021
- [2] International Journal of Advanced Research in Engineering and Technology (IJARET) Volume 11, Issue 11, November 2020, pp. 1934-1940, Article ID: IJARET\_11\_11\_182 IAEME Publication Scopus Indexed A REVIEW PAPER ON SOCIAL INTERNET OF THINGS (SIOT) Sarada Prasanna Pati, Bhupendra Gupta Department of Computer Science and Engineering, Siksha 'O' Anusandhan (Deemed to be University), Bhubaneswar, Odisha
- [3] Design-Integrated IoT Capacity Building using Tangible Building Blocks Christian Stary Institute of Business Informatics – Communications Engineering Johannes Kepler University Linz Austria christian.stary@jku.at Claudia Kaar Institute of Business Informatics – Communications Engineering Johannes Kepler University
- [4] Internet of Behaviours (IoB) and its role in customer services Mohd Javaid a,<sup>\*</sup>, Abid Haleem a, Ravi Pratap Singh b, Shanay Rab a, Rajiv Suman c a Department of Mechanical Engineering, Jamia Millia Islamia, New Delhi, India b Department of Industrial and Production Engineering, Dr B R Ambedkar National Institute of Technology, Jalandhar
- [5] Internet of Behaviors: A Survey Jiayi Sun, Wensheng Gan<sup>\*</sup>, Han-Chieh Chao, Philip S. Yu, Fellow, IEEE and Weiping Ding
- [6] The Internet-of-Behavior as Organizational Transformation Space with Choreographic Intelligence Christian Stary(B) BI, Johannes Kepler University, Linz, Austria.

- [7] The Internet-of-Behavior as Organizational Transformation Space with Choreographic Intelligence Christian Stary(B) Business Informatics, Johannes Kepler University Linz, Linz, Austria.
- [8] Semantic Text Analysis on Social Networks and Data Processing: Review and Future Directions Mowafaq Alzboon Department of Science and Information Technology, Jadara University, Irbid, 21110 Code, Jordan Received: 22 Feb. 2022, Revised: 2 Apr. 2022, Accepted: 3 May 2022
- [9] A Comparative Study of HITS vs PageRank Algorithms for Twitter Users Analysis Ong Kok Chien, Poo Kuan Hoong and Chung Ching Ho Faculty of Computing & Informatics Multimedia University Cyberjaya, 63100, Selangor, Malaysia
- [10] A review on sentiment analysis and emotion detection from text Pansy Nandwani<sup>1</sup> · Rupali Verma<sup>1</sup> Received: 6 April 2021 / Revised: 25 June 2021 / Accepted: 10 July 2021 / Published online: 28 August 2021 © The Author(s), under exclusive licence to Springer-Verlag GmbH Austria, part of Springer Nature 2021
- [11] A Survey on COVID-19 Data Analysis Using AI, IoT, and Social Media Muhammad Junaid Butt <sup>1</sup> , Ahmad Kamran Malik <sup>1,\*</sup> , Nafees Qamar <sup>2</sup> , Samad Yar <sup>1</sup> , Arif Jamal Malik <sup>3</sup> and Usman Rauf
- [12] A survey on deep learning for textual emotion analysis in social networks Sancheng Peng a , Lihong Cao b,\* , Yongmei Zhou c , Zhouhao Ouyang d , Aimin Yang e , Xinguang Li a , Weijia Jia f , Shui Yu g
- [13] A survey on sentiment analysis methods, applications, and challenges Mayur Wankhade<sup>1,2</sup> · Annavarapu Chandra Sekhara Rao<sup>1,2</sup> · Chaitanya Kulkarni<sup>1,2</sup> Published online: 7 February 2022 © The Author(s), under exclusive licence to Springer Nature B.V. 2022
- [14] Analytics of social media data – State of characteristics and application Cécile Zachlod a , Olga Samuel a,\* , Andrea Ochsner b , Sarah Werthmüller a a University of Applied Sciences and Arts Northwestern Switzerland, Riggenbachstr. 16, 4600 Olten, Switzerland b University of Applied Sciences and Arts Northwestern Switzerland, Peter Merian-Strasse 86, 4002 Basel, Switzerland
- [5] Designing Internet of Behaviors Systems Mahyar T. Moghaddam University of Southern Denmark Odense, Denmark mtmo@mmmi.sdu.dk Henry Muccini University of L'Aquila L'Aquila, Italy henry.muccini@univaq.it Julie Dugdale University Grenoble Alps Grenoble, France julie.dugdale@imag.fr Mikkel Baun Kjærgaard University of Southern Denmark Odense, Denmark
- [6] Emotion Analysis: A Survey Nida Manzoor Hakak Dept of CSE Maharishi Dayanand University Haryana, India hakaknida04@gmail.com Mohsin Mohd Dept of CSE Krukshehra University, India Mahira Kirmani Dept of CSE Maharishi Dayanand University Haryana, India Mudasir mohd Department of CS University of Kashmir J&K, India
- [7] Improving Sentiment Analysis for Social Media Applications Using an Ensemble Deep Learning Language Model Ahmed Alsayat<sup>1</sup> September 2021 / Published online: 11 October 2021
- [8] Internet of Behavior (IoB) and Explainable AI Systems for Influencing IoT Behavior Haya Elayan, Moayad Aloqaily, Senior Member, IEEE, Fakhri Karray, Fellow, IEEE, Mohsen Guizani, Fellow, IEEE
- [9] IoT-Enabled Social Relationships Meet Artificial Social Intelligence Sahraoui Dhelim, Huansheng Ning, Fadi Farha, Liming Chen, Luigi Atzori and Mahmoud Daneshmand
- [10] Machine learning and Natural Language Processing of social media data for event detection in smart cities Andrei Hodorog \* , Ioan Petri, Yacine Rezgui School of Engineering, Cardiff University, Queen's Buildings, The Parade, Cardiff, CF24 3AA, United Kingdom
- [11] Role Of Various Data Mining Techniques Used For Social Media Data Smruti Smaraki Sarangi Department of Computer Science and Engineering, Kalinga University, Naya Raipur, Chhattisgarh.
- [12] Sentiment Analysis in Social Media Data for Depression Detection Using Artificial Intelligence: A Review Nirmal Varghese Babu<sup>1</sup> · E. Grace Mary Kanaga<sup>1</sup> Received: 23 August 2021 / Accepted: 29 October 2021 / Published online: 19 November 2021 © The Author(s), under exclusive licence to Springer Nature Singapore Pte Ltd 2021
- [13] Sentiment Analysis of Semantically Interoperable Social Media Platforms Using Computational Intelligence Techniques Ali Alqahtani <sup>1</sup> , Surbhi Bhatia Khan <sup>2,3,\*</sup> , Jarallah Alqahtani <sup>4,\*</sup> , Sultan AlYami <sup>4</sup> and Fayez Alfayez <sup>5</sup>
- [14] Sentiment analysis: A survey on design framework, applications and future scopes Monali Bordoloi<sup>1</sup> · Saroj Kumar Biswas<sup>2</sup> © The Author(s), under exclusive licence to Springer Nature B.V. 2023
- [15] Social Media Analytics of the Internet of Things Jim Scheibmeir Colorado State University Yashwant K. Malaiya Colorado State Social Media and IOT Wearables in Developing Marketing Strategies. Do SMEs Differ From Large Enterprises? Irina Maioreescu <sup>1,\*</sup> , Mihaela Bucur <sup>1</sup> , Bogdan Georgescu <sup>2</sup> , Daniel Moise <sup>2</sup> , Vasile Alecsandru Strat <sup>3</sup>.



[16] The Impact of Personality Traits on Social Media Use and Engagement: An Overview Georgios Lampropoulos International Hellenic University, Greece Theofylaktos Anastasiadis Aristotle University of Thessaloniki, Greece Kerstin Siakas University of Vaasa, Finland Errikos Siakas National Archaeological Museum, Greece

[17] International Journal of Trend in Scientific Research and Development (IJTSRD) Volume 5 Issue 3, March-April 2021 Available Online: [www.ijtsrd.com](http://www.ijtsrd.com) e-ISSN: 2456 – 6470 @ IJTSRD | Unique Paper ID – IJTSRD38731 | Volume – 5 | Issue – 3 | March-April 2021 Page 254 The Influence of Social Media Usage and Personality Traits on Personal Relationship and Job Performance Dong-Jenn Yang, Oyun-Erdene Tsedevsuren, Tsung-Kuang E. Ma Department of Business Administration, I-Shou University, R.O.C., Kaohsiung, Taiwan

[18] International Journal of Behavioral Research & Psychology (IJBRP) ISSN 2332-3000 \*Corresponding Author: Maylaf Hiruy Alemayehu, Researcher, Information Network Security Agency, Ethiopia Published: December 29, 2020 Citation: Maylaf Hiruy Alemayehu, Tamirie Andualem Adal. The Relationship between Personality Trait and Social Media Addiction. Int J Behav Res Psychol. 2020;8(2):261-270.



### Prof. Amar Shinde

Prof. Amar Shinde is an academic and researcher specializing in the field of **Computer Applications**. He holds a M.C.A degree from University of Pune & pursuing Ph.D. in Computer Management and have contributed significantly to both teaching and research in this domain.

He additionally has completed PGDHRM from Indira Gandhi National Open University

He has published several research papers in national and international conferences. He has also published books for International publications on technical subjects.

He has participated in various technical symposiums and workshops as a speaker and contributor

His core research interests include **machine learning, data analytics**, and **web technologies**. He focuses on developing innovative solutions for intelligent systems, data-driven decision-making, automation tools. Prof. Amar is also actively involved in interdisciplinary research combining computer applications with areas of education, and business intelligence in FMCG & retail sectors. He/continue to contribute to the academic and research community through scholarly work and collaborative projects.