ONLINE GAMING ADDICTION USING PSD MODEL

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ABSTRACT

Online gaming addiction is a growing problem affecting people of all ages. This research paper looks into the issues of people getting addicted to online games. We'll try to figure out why it happens, what problems it causes, and what we can do about it. We will also explore the reasons behind this addiction, how it harms health and personal connections, and the methods professionals use to assist those affected. Our goal is to understand and find solutions for online gaming addiction so that everyone can enjoy games without harm.

They used data from the comprehensive scale for assessing game behavior and applied different techniques to the EEG data. One important finding was that brainwave patterns, particularly in the occipital region, showed significant differences in addicted players compared to non-addicted ones. These differences could potentially be used to identify mobile game addicts. In other words, they were using brainwave patterns to spot signs of addiction to mobile games.

Keywords: Mobile Game Addiction, EEG Analysis, Physiology Of Addiction.

I.   INTRODUCTION

The increasing concern about online game addiction, which is recognized as a behavioral addiction with characteristics like mood modification, tolerance, neglecting responsibilities, and physical addiction. Games can have positive effects, such as skills development, creativity, and entertainment. Excessive gaming leads to addiction, which has negative consequences like academic decline, social isolation, depression, and even suicidal thoughts.

The goal is to understand both the psychological and psychological aspects of addiction and to promote healthy game-playing while avoiding addiction.

Online game addiction is a condition characterized by severely reduced control over gaming habits, resulting in negative consequences in many aspects of your life, including self-care, relationships, school, and work.

The potential for online games to be used for beneficial purposes in health and education, not just for entertainment.

II.   METHODOLOGY

In the last ten years, there has been a lot of research focused on diagnosing and treating mobile game addiction. This paper aimed to find early signs of game addiction by analyzing brainwave patterns (EEGs) of addiction and non–addiction players and develop a system to identify potential game addiction. The research has two steps:

1. Diagnosis of Addiction: The first part of the study looked at how the brain activity of addicted and non-addicted mobile game players differs. They used a questionnaire to gather information about the participants and analyzed their EEG data to see if any patterns could distinguish addicted players.

2. Wearable Detection System: The second part involved designing a system that could practically identify mobile game addiction using the results from the diagnostic tests. This system would likely involve some kind of wearable device to monitor a person's brain activity while they play mobile games.

The model I used is Power spectral Density (PSD) which is used to analyze how the power or energy in a signal is distributed across different frequencies. It helps understand the frequency components of a signal, making it useful in various fields like signal processing, EEG analysis vibration analysis, and more this used for the research.

EEG data was collected and analyzed to distinguish between addiction and non-addiction game players based on their brainwave activity during mobile game playing. I used Python with NumPy and SciPy libraries for PSD estimation and EEG signal analysis.

III.   MODELING AND ANALYSIS

Satisfaction with life, often referred to as life satisfaction or subjective well-being, is a critical concept in the field of psychology and social sciences. It measures an individual's overall contentment and happiness with their life. Researchers frequently study life satisfaction to gain insights into factors that contribute to a person's well-being. These factors may include economic status, health, social relationships, and personal values. Research on life satisfaction often involves surveys and questionnaires to assess and quantify an individual's level of satisfaction. The pie chart of Satisfaction with life (SWL) is shown in Figure No. 1
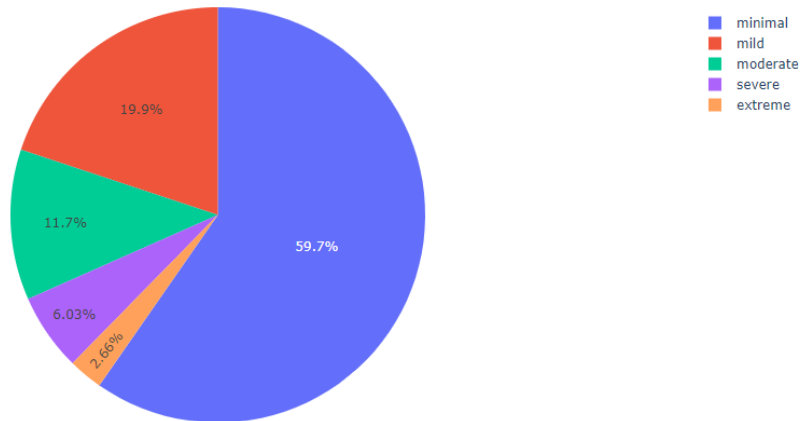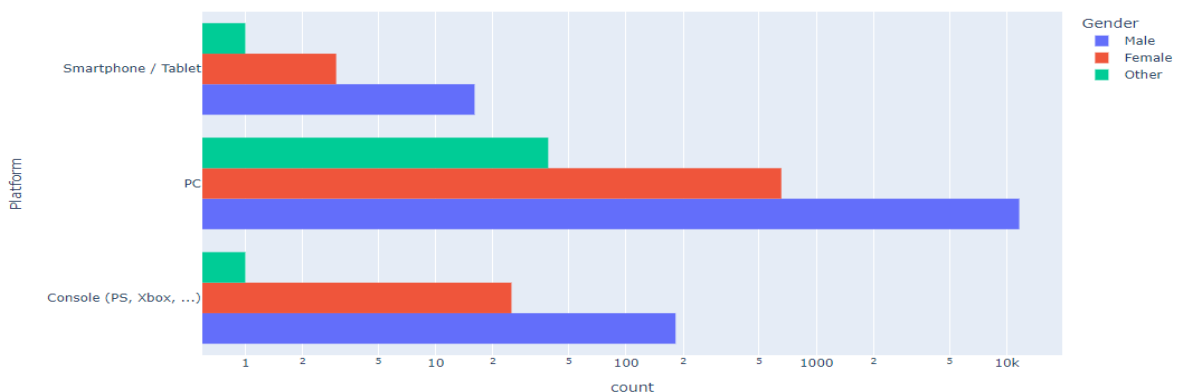

Figure no.1- Satisfaction with life (SWL)

IV.   RESULTS AND DISCUSSION
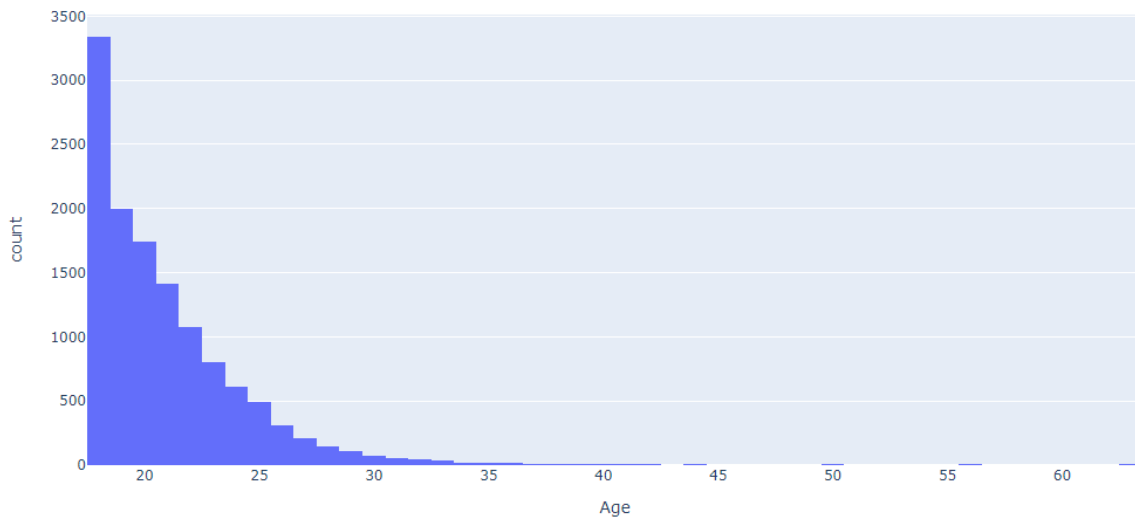
The result is shown in figure no.2
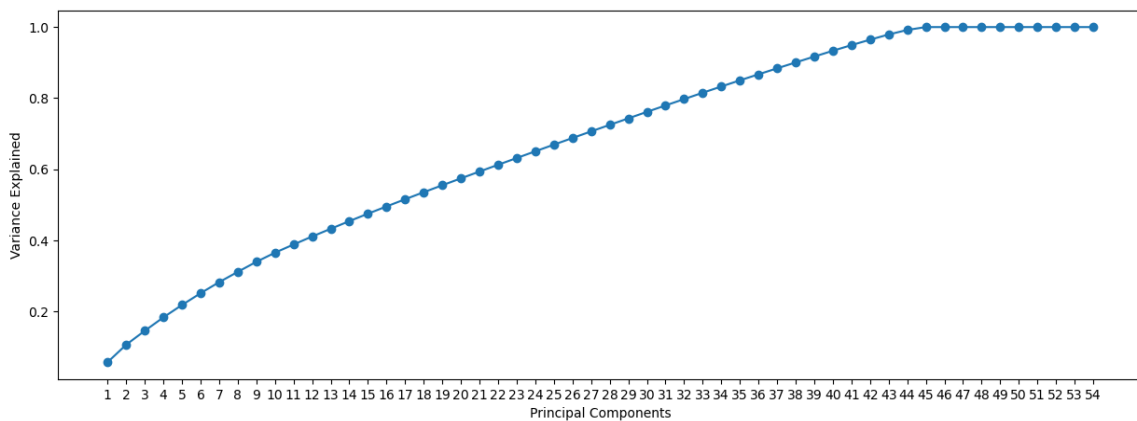
Figure no.2

In research, a side-by-side bar graph I present in Figures 3 & 4 that shows the comparison of playstyle by gender can provide valuable insights into the relationship between gaming habits and gender.

Figure no.3- Side by Side Bar Graph of Playstyle by Gender.

Figure no.4- Playstyle of gender.

V.   CONCLUSION

This research has shed light on the dynamics of online gaming addiction and its impact on individuals. The findings reveal a significant association between excessive online gaming and various psychosocial factors, such as age, gender, and gaming behavior. Online gaming addiction is a growing concern, impacting individuals of all ages. It can lead to various negative consequences, such as isolation and academic decline. Understanding the signs and seeking help when needed is crucial in addressing this issue and promoting healthier gaming habits.

VI.   REFERENCES

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