

Universiti Teknologi MARA

**Pornography Addiction Recognition
based on EEG**

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ABSTRACT

Pornography is a portrayal of sexual subject contents for the exclusive purpose of sexual arousal that can make a person becomes addicted. The availability and easy Internet connectivity have created unprecedented opportunities for sexual education, learning, and growth for adolescences. Hence, the risk of porn addiction developed by teenagers is increased due to highly prevalent porn consumption. To date, there is no empirical measurement to detect pornography addiction and no early detection for pornography addiction is available except using questionnaire. The problems of using such method arises because the participants may suppress or exaggerate their answer because porn addiction is considered taboo in the community. Hence, the purpose of this project is to develop an engine with multiple classifiers to recognize pornography addiction using electroencephalography (EEG) signals and to compare classifiers performance. In the experimental study, EEG data were given from UIA collaborators. The features data that obtained has been extracted using Mel-Frequency Cepstral Coefficients (MFCC). The main contribution for this project is the classification process where it compares three classification techniques, namely; Multilayer Perceptron (MLP), Naive Bayesian (NB), and Random Forest (RF). Through the findings, this project can be concluded that MLP classifier gives a better accuracy compared to Naïve Bayes and Random Forest. Based on the results, MLP classifier is preferable to be used to detect whether a person is having pornography addiction or not. Result of this study can be as an alternative to have an early intervention for porn addict teenagers so that the negative impact can be minimize and EEG can be one of method to measure porn addiction.

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CHAPTER 1

INTRODUCTION

This chapter provides the overview of the background of research, problem statement, objective, scope of project and significant of research on pornography addiction recognition based on EEG.

1.1 Background of Study

Habit and addiction are two different things. Habit makes people in control with their choices whereas addiction results to in control of their own choices. Addiction may affect everybody. A person will eventually must have at least one of the habit that they addicted to do often in their daily life. Cherry (2016) noticed that a few activities are so regular and it's difficult to believe humans can become addicted to them. People with an addiction do no longer have control on what they are doing, taking or the use of what they are addicted to (Felman, 2018)

“Addiction” simply referred to “giving over” or being “highly devoted” to a person or activity, or engaging in a behavior habitually, which could have positive or negative implications (Sussman & Sussman, 2011). Addiction can be divided into 2 types which is behaviour addiction and substance addiction (Alavi, Ferdosi, Jannatifard, Eslami, Alaghemandan & Setare, 2012). According to Zou, Wang, Uquillas, Wang, Ding & Chen, (2017), substance addiction is a neuropsychiatric disorder characterized by a recurring desire to continue taking the substance despite harmful consequences in which it could be drugs, alcohol, sex and gambling. The most common substance is drug addiction where the addicts have not only abuse one type of drug but combine multiple drugs or trying different type of drug (Dyer, 2018). Meanwhile the non-substance addiction (behavioural addiction) covers pathological