IMPACT OF DEEPFAKE TECHNOLOGY ON POLITICAL BEHAVIOR OF YOUTH

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ABSTRACT

The topic of research study is Impact of Deepfake Technology on Political Behavior of Youth. The purpose of the research was to find out the Impact of Deepfake Technology on Political behavior of Youth. For this study, Propaganda model was applied, this model selected through indepth literature review and propaganda model use there.

This research was based on quantitative techniques, while cross sectional sampling was used to collect the responses. Sample size for this study was 400, which was calculated through statistical formula for sample size. A questionnaire was distributed among the sample from twouniversities in Lahore.

The questionnaire was piloted Cronbach's Alpha coefficient of reliability was 625. The data wereanalyzed using descriptive statistics and one sample t-test was used to test the hypothesis. The percentage and frequency of answers were calculated using SPSS (Statistical Package for Social Science). The results of the study shows that negative impact of deepfake technology on political behavior of youth. The result came were positive to accomplish the milestone of the topic chooseby the researcher.

Keywords: *Deepfake Technology, Political Behavior, Literacy, Gender, Youth*

INTRODUCTION

In earlier times, it was believed that what a person is seeing and hearing is true. In today's modern and social media era what a person is seeing and hearing is not the truth because through the Deepfake it is shown closer to the truth that it seems to be true but in reality it is a lie. When the technology was not so advanced, the images were edited through Photoshop as per the desire. It was easy to edit pictures that were still, but as the technology became more advance. The editing process also evolved even that edit the video images.

The word youth has different meanings in different societies of the world. According to The United Nations, youth ranges between the age of 15 and 24. The General Assembly resolution (Katherine, 2016).

Deepfake is synthetic media in which one person image and voice is replaced with another person's image and voice in the particular video. Although the process for creating fake content is not new. Deepfakes uses powerful skills to manipulate, including machine learning and artificial intelligence (AI) easily deceive with the help of Deepfake audio and video content.

Deepfakes are being used in every aspect of our lives as (blackmail, art, acting, entertainment, internet meme, marketing) and politics as well presenting positively and negatively in different styles like humorous, serious and speeches.

Deepfake video came into being with the help of artificial intelligence(AI). The Deepfake videos are in which one person's face and voice are replaced with another person's face and voice. The editing process in Deepfake video is done so

skillfully that it becomes difficult to recognize the original content. Social media exists so that people can communicate with each other or exchange information, but in recent times, false information is disseminated through Deepfake content. In recent years, fake news has become a huge problem for our society and democracy that has threat for public discourse and behaviors (Borges,2018;Qayyum,2019).

1.1. Deepfake Technology

Deepfake means something seems like true but actually that is lie or fake. With the help of technology a lie to be presented in such a way that it seems closer to the truth. Any of various media, especially video, that has been digitally manipulated to replace one person's likeness convincingly with that of another, often used maliciously to show someone doing something that he or she did not do.(Oxford English Dictionary,2018).

Deepfake technology is a technology in which some one's face is taken and replaced on others body. This can done with the help of artificial intelligence (AI). Deepfake is the deep learning program of artificial intelligence (AI) a thing is fake but with the help of technology it is difficult to recognize that it is actually fake. With the help of deepfake technology, a face taken from a photo can be replaced on the body of a person in a video and then his facial expressions can be controlled and changed by machine learning. Many fake videos are made with the help of this technology (Saqib,2021).

1.2. Impact of Deepfake Technology

Deepfake technology is real threat to our society, political system and business it can be undesirable via legislation and regulation, corporate policies and voluntary action, education and training, as well as the development of technology for deepfake detection, content authentication, and deepfake prevention. (Westerlund, 2019).

Deepfake technology impact in many industries, including movies, educational media and digital communication, games and entertainment, social media and various business fields, such as fashion. (Maras, 2019)

Deepfakes draw on algorithmic leverages advanced capabilities through power and machine learning ML processing information to the users. Present to users in such a way manipulated with the face, voice and body of a real person in the world and arranged in such a way that fake video content looks real. Deepfake technology applications are creating massive social problems in the society and our traditional journalism. Due to the increasing trend of deepfake technology and it's problems it needs some ethics of communication (Cover, 2022).

1.3. Deepfake and Political Behavior

Political Deepfake videos are using as a tool of propaganda for political behavioral engineering in society. Political behavior as an aspect of politics seeks to explain the political effects person's views, ideology and political participation. Political behavior is the subset of human behavior that includes politics and power (Deutsch & Adorno, 1965).

Deepfake content is used to spread false information, which can become a challenge during elections. Political actor could try to character assassination or political scandal by deepfake content of opponent to gain the goal of their agenda (Howard, 2018). Historically, misinformation in politics involved saying or writing something about someone else. With deepfake attackers cause their target to become agents of their own subversion (Villasenor, 2019) Regulation of political deepfakees Presents a significant challenge. In most jurisdictions any legislation that would seek to ban deepfakes of political official or candidates would require significant carve outs to protect freedom of expression of this creator (Farish, 2022).

1.4. Research Objectives:

The objectives of this research are as follows:

1. To find out the impact of Deepfake technology on political behavioral engineering.

2. To analyze the change in perception through Deepfake on the basis of literacy.

3. To analyze the change in perception through Deepfake on the basis of gender.

1.5. Significance of the study:

The significance of the study describes, how Deepfake videos influence the youth's thinking about political narrative and subsequent election process. This study is quite unique and one of the first due to its vast impact on society in term of political behavioral engineering, views, ideology, and levels of political participation especially on the basis of literacy and gender discrimination. The finding of this study will provide a strong guideline about awareness and effects of deepfake technology on youth to policy makers of social media and government.

1.6. Research Hypotheses:

H1: The Deepfake content play vital role in the political behavioral engineering.

H2: There is difference between the impact of Deepfake videos on the basis of literacy.

H3: There is difference between the impact of Deepfake videos on the basis of gender.

Research Questions:

RQ1: Do the Deepfake videos play a role in political behavioral engineering?

RQ2: Do the Deepfake videos create different impact on the basis of literacy on viewers?

RQ3: Do the Deepfake videos create different impact on the basis of gender on viewers?

1.7. Statement of the Problem:

Media plays vital role in every aspect of human life forcing the people to trust on the provided medium, hence connects information and people. In present study, researcher intends, how Deepfake videos of social media influence the behavior of the youth/mass and engineer the behavior among political parties and their leaders. This study also intends to explore the difference in impact on the basis of gender and literacy. This research is one of the first to scrutinize the impact of deepfake technology on the political behavior of youth in public and private universities in Lahore.

1.8. Research Gap:

The researcher, through literature review, came to know that deepfake technology covered in the studies, where than researcher reached the point not been covered by the researchers. The study intends to answer which is not previously addressed. There is a huge gap among the current and previous research i.e."The Impact of Deepfake Technology on political Behavioral Engineering on the basis of literacy and gender". Deepfake videos development of a believably realistic computer generated video of people saying things they would not have said in real life. This has been revealed in the research that policymakers have expressed their great concern on deepfake videos which may mislead voters and influence election results (Ternovski, Kala & Aronow, 2021). This study was describe deepfake technology and its impact on political behavior of youth. The researcher tried to point out the deepfake technology correlation with its political behavior of youth.

1. Literature Review

An attempt has been made to review the relevant literature available on the research topic. The purpose of such literature review is to present a comprehensive analysis on new topics of the research and impact of the Deepfake technology on political behavioral engineering. Studying previous literature is considered a basic step for the further research in order to review that what kind of study has been carried out earlier on the relevant topic. Such reviews help the researcher to define his plans and help to explore innovative fields of study.

The previous study discuss different issues in social media at different levels. The present study is to find out the impact of Deepfake technology on political behavioral engineering covering the basic foundation of the issue. It delivers more information about the issue and eliminates the possibility of unnecessary duplication. Furthermore important data on research obtain from earlier research reports (Streher, 2008). New digital technology makes it difficult to distinguish between real and fake media. Deepfakes videos are one of the recent developments in this issues.

Which are closer to reality with the help of artificial intelligence to reflect that someone says and does in a way,that has never been done before. The reach and speed of social media can quickly reach millions of people and have negative effects on our society (Westerund, 2019).

Fast and significant advancement in artificial intelligence (AI) has remarkably mold the current technological aspects, which has generated an exceptional interest among academia and beyond. This technology, which is considered as an ideal and revolutionary technology has attracted the attention of the researcher scholars and professionals. It provide anticipation in a vast range of field. This technological advancement has given rise to a lively debate on its social, ethical and economic impact and highlight important questions that require deepest multidimensional investigations. Artificial intelligence emerges as the start of human future (Battista, 2024).

1.1. Theoretical Framework

A theoretical framework is essentially review or an approach to existing theories. A theoretical framework serves as a road map for developing the own arguments you will use in your study. Theories are developed by researchers to elaborate phenomena, draw connection and make prediction. In theoretical framework you explain the existing theories that support your research, showing that your study or topic is relevant and establish the basic ideas. Theoretical framework is a first step for your research or thesis. A well theoretical frameworksets you up for success later on in your research and writing process (Sara Vinz, 2022).

A theoretical framework consists of concepts and together with their definitions and reference to relevant scholarly literature, existing theory that is used for your particular study. The theoretical framework must demonstrate an understanding of the theories and concepts that are relevant to the topic of your research paper and that linked to the broader areas of knowledge being considered.

An explicit statement of theoretical assumptions permits the reader to evaluate themcritically. The theoretical framework connects the researcher to existing knowledge. Guided by a relevant theory, you are given a basis for your hypotheses and choice of research methods. Articulating the theoretical assumptions of a research study forces you to address questions of why and how. It permits you to intellectually transition from simply describing a phenomenon you have observed to generalizing about various aspects of that phenomenon. Having a theory helps you identify the limits to those generalizations. A theoretical framework specifies which key variables influence a phenomenon of interest and highlights the need to examine how those key variables might differ and under what circumstances.

2. Research Design and Methodology

The study impact of Deepfake technology on political behavior of youth adopt qualitative method approach which conduct by using the survey method technique throughquestionnaire to find out the result of this study.

Data collection from the totalpopulation of 400 in which 200 undergraduates students from University of the Punjab and also 200 undergraduates students from Minhaj University Lahore through questionnaire. Researcher applied convenient sampling technique, was used to help the researcher create the sample for this study. This kind of sampling method is used when a researcher needs to recruit a particular group of participants for a survey. In this study deepfake technology is independent variable w herepolitical behavior of youth about deepfake technology is dependent variable.

2.1. Statistical Analysis.

SPSS software was used to analyze interpret the collected data. The descriptive technique was opted to analyze the collected data. This technique is often comprised of building tables of the values, e.g, methods of dispersion such as variance or standard deviation. Furthermore. T-test was used for the hypothesis testing by the researcher.

H1: The Deepfake content play vital role in the political behavioral engineering. Validation.

Since p-value $> \alpha$, H_1cannot be rejected. the difference between the sample average of **Group-1** and **Group-2** is statistically significant.

H2: There is difference between the impact of Deepfake videos on the basis of literacy.

Since p-value $> \alpha$, H_2 cannot be rejected. the difference between the sample average of **Group-1** and **Group-2** is statistically significant. This hypothesis came up with the result that 51 percent of the respondents agreed that political deepfake technology content has negative impact on the basis of literacy.

H3: There is difference between the impact of Deepfake videos on the basis of gender

Since p-value $> \alpha$, H_2 cannot be rejected. the difference between the sample average of **Group-1** and **Group-2** is statistically significant. This hypothesis came up with the result that 52 percent of the respondents agreed that political deepfake technology content has negative impact on the basis of gender.

3. Results
3.1. Summary Results

Description	Sample 1	Sample 2	Differences
Mean	71	29	42
Standard Deviation	6	4	5.099
n	200	200	400
Standard Error	0.424	0.283	0.51
95% CI for mean	70.163/71.837	28.442/29.558	40.998/43.002
DF	199	199	398
t			82.353
P-value			0
Tails			2/tailed
Conclusion			**Reject null hypothesis: Mean Differ**

4. Conclusion.

After going through complete study and data analysis keeping in view the objective of the study the researcher has concluded that deepfake technology has new phenomena of the media industry in this digital era. Media is an important part of our daily life and specially social media network is very important part of our life. The content of the social media is playing very significant role of our life. Deepfake content is one of them because the speedy diffusion of information on social media by internet in few minutes deepfake content also diffuse on social media platforms. Deepfake content consist of disinformation and manipulated the truth by deepfake technology and mislead the perception of people. Political deepfake technology use as tool of propaganda against the opposition for achieving their own goal.

The present study has investigated the impact of deepfake technology on the political behavior of youth and find out the impact of political behavioral engineering. The study conducted inside the findings of the evaluate of the applicable literature. The researcher has use the survey questionnaire as a tool for the data collection form the two universities students of Punjab University Lahore and Minhaj University Lahore. The sample size of the study is 400. The major objective of the study is find out the impact of deepfake technology on Political behavior of youth and check the political behavioral engineering of youth.

Researcher further conclude that impact of deepfake technology on political behavior of youth in different aspects. Deepfake technology is new phenomena and its impact on literacy level is different because people didn't full awareness about it and their perception about it is negative similarly gender wise also their perception about is negative and pessimistic.

5.1. Future Recommendations

The present study was restricted to the two universities one was Minhaj University of Lahore and Second was The Punjab University of Lahore with limited sample size, so another research should be conducted on different students of universities in Lahore and other city using same methodology. This study was confined at urban area it should be conducted at rural areas using the same methodology with large sample

size.

Focus group based research can be done on this subject.

Other than youth, many samples can be selected as respondents for the data collection. Social media platforms should conduct the programs and campaigns about the awareness of Deepfake technology and its types of content. Social media is source of information so it should not allowed providing immoral or manipulated transmission to the people. Social media regulatory authorities should controlled the fake and disinformation content on the social media platforms. Government should make the policies about such new phenomena of deepfake technology.

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