**Project Proposal**

Pennsylvania State University

IST 557

**Topic**

Exploring the Impact of Deepfake Warnings on People's Video Perception

**Research Questions**

1. How does viewers' attentional focus differ between videos labeled with a deepfake warning and unlabeled videos?
2. Does the presence of a 'deepfake warning' label on one video influence viewers' attentional focus on another, unlabeled video?

**Hypothesis**

RQ1: When people are watching normal videos without any deepfake warning, they may focus more on the spoken content of the characters in the video. However, after receiving a deepfake warning, they might pay more attention to elements they consider unnatural or potentially indicative of a deepfake, such as stiff facial expressions or strange color blocks in the background.

RQ2: Yes it does. This influence occurs when people realize a video could potentially be a deepfake one; even if they are watching a real video without any warning label, they may begin to question its authenticity, leading to a shift in focus similar to when they watch a fake video.

**General Type of Study**

Interview

**Experiment Procedure**

The experiment will be divided into four phases:

**Phase 1:** We will select video clips of two people giving speeches (the speech content will not be specifically chosen). One video will be real, and the other will be a deepfake. The selection criteria for the videos are: 1) a main speaker with clear facial expressions, 2) a complete viewpoint expressed, 3) a meaningful background (such as a group of audience, a news setting), and 4) a fake video should have subtle imperfections which are difficult to notice without close inspection. Participants will be shown both videos in a fix order (real video first).

**Phase 2:** A brief interview will be conducted with the following questions:

1. What viewpoint did the person in the video express? / Please summarize the video content.
2. What did you notice while watching the video?
3. What are your thoughts on these two videos? Please explain separately.

**Phase 3:** We will select two new videos, different from those in Phase 1, one real and one deepfake, following the same criteria. First, we will show participants the fake video with a prominent deepfake warning label, followed by the real video without any warning label.

**Phase 4:** A brief interview will be conducted with the following questions:

1. What viewpoint did the person in the video express? / Please summarize the video content.
2. What did you notice while watching the video?
3. Did the presence of the warning affect your perception of the video?
4. What are your thoughts on these two videos? Please explain separately.

**Analysis Approach**

This study will be using a mixed-methods approach, combining both quantitative and qualitative analysis.

Qualitative approach: We will use interviews to study the psychological impact of the deepfake warning on how people perceive videos.

Quantitative approach: We would code and categorize responses in order to count how often participants mention specific elements (like facial expressions, background and content). This approach will be used to study where people concentrate and whether the presence of a deepfake warning causes a significant shift in their attention.

**Participants**

Number: 6-9

Type: PSU graduate students without eyesight or hearing impairments

Recruitment Method: Word of mouth

**Study Design**

Within-subjects

**Equipments**

* Laptops for playing videos
* Recording tool (Zoom)

**Team Work Plan**

We intend to hold weekly discussions after class to review progress and task assignments. If necessary, we will schedule additional meetings based on the experiment’s progress and needs. For other communications, we will use WhatsApp.

Please see below for division of tasks within the group (tentative):

|  |  |
| --- | --- |
| Literature review | Rearcher-1 |
| Search for/create videos that meet the requirements | Rearcher-2 |
| Interview | All |
| Data processing | Rearcher-1, Rearcher-2 |
| Data Analysis | Rearcher-3 |