IRB Application - Evaluating the Social Media Safety and Privacy of Vtubers - Creating a List of Guidelines for Vtubers to Protect their Safety on Social Media

COS435 Information Privacy Engineering

Principal Investigator: Caleb Corlett ([caleb.corlett@maine.edu](mailto:caleb.corlett@maine.edu))

Co-Investigator: Joe Binette ([joseph.binette@maine.edu](mailto:joeseph.binette@maine.edu))

Faculty Sponsor: Sepideh Ghanavati ([sepideh.ghanavati@maine.edu](mailto:sepideh.ghanavati@maine.edu))

## Funding:

N/A

## Summary:

This study aims to create a list of behavioral guidelines specialized for vtubers or other high privacy, low tech literacy individuals to improve one’s individual privacy and information security on social media websites.

A Vtuber is a content creator that performs over the internet behind a digital avatar, often resembling that of a character similar to those from Japanese anime that mimics their facial expressions and some of their actions. Compared to traditional influencers and content creators, this digital avatar allows vtubers much more privacy, as they can perform without showing their actual face. This unique level of privacy often attracts scrutiny into the vtuber’s identity. When using social media, vtubers must take exceptional care to protect their individual privacy and to avoid putting themselves at risk from malicious actors that wish to see the metaphorical man behind the curtain. Even though the digital avatar vtubers use may be complex and require a degree of digital literacy to utilize, vtubers come from all walks of life and may have backgrounds other than tech or they just might not have a good grasp on individual privacy or information security enough to protect themselves from malicious actors on the internet. This study aims to use publicly available records of past incidents, current practices within vtuber communities, and the most current research on individual privacy and information security best practices to produce a specialized and easy to understand list of behavioral guidelines for vtubers to follow to improve their individual privacy and information security on social media sites.

Clipping culture is a common practice within vtuber communities where a short segment from a livestream or piece of recorded content is uploaded online, showing off a funny or important moment from a longer piece of a vtuber’s content in an easily consumable format that is bingeable and gratifying to watch. Clipping culture allows for vtubers to gain flash-virality (for possibly positive or negative reasons) and with it, attention from a lot of new people who aren’t a part of their trusted audience, which may include attention from potential malicious-actors. If a vtuber has a weak grasp on individual security, they could risk the security and safety of themselves, their children, their family, their uninvolved friends, or other vtubers.

The reason for choosing vtubers as the target of this study is because of the unique circumstances regarding vtubers and their online privacy. Vtubers, like more traditional influencers and content creators, put on a display of themselves and their personalities in front of audiences that can reach into the thousands. The digital avatar that vtubers use, however, allow them to perform under an untraditional amount of individual privacy. With this increased privacy comes increased scrutiny from their viewing audience, which may result in a breach of a vtuber’s individual privacy caused by malicious actors if a vtuber does not have a solid grasp of individual privacy and information security practices.

The significance of this study is that it will result in an easily understandable and distributable way to inform vtuber and other high privacy, low tech literacy individuals of techniques and behaviors they could use to improve their information security and protect their identities better within the realm of social media. The decision to specialize these guidelines was due to the reason that individual security guidelines are much more effective and widely utilized when they go beyond generic cases (Silic et al. 2016).

This study will consist of an observational analysis on publicly available information regarding individual cases of breaches of vtubers’ privacy and security, an observational analysis on publicly available information regarding widely-used vtubing practices used to protect individual privacy and information security and the reasons behind them, as well as a literature review of the most recent academic articles regarding vtubers, vtuber culture, as well as best practices regarding individual privacy and information security on social media.

### Methods:

Using publicly available data from Twitch, Youtube, X, and Reddit. An observational analysis will be done to explore previous cases regarding breaches of vtubers’ privacy and security as well as current practices used by vtubers to protect their individual privacy and information security. From these, simple guidelines will be created and added to a list, removing any association between any specific vtuber and their vulnerability, for other vtubers or individuals to follow to improve their individual privacy and information security on social media. This study will occur in Fall 2024.

There will be no interaction with individuals, this study is purely observational

All individuals whose data is used will be anonymized to protect their privacy or

pseudonymized as much as possible if anonymization is not possible.

This study will also consist of a literature review into the latest academic research relating to vtubers, vtuber culture, individual privacy and information security best practices on social media. Guidelines will be created from the academic literature and added to the list in order to provide the latest academic insight in a simple and to-the-point manner.

Any guidelines sourced from academic research will be cited appropriately.

## Personnel:

Primary Investigator: Caleb Corlett

Currently a 3rd year undergraduate student studying Computer Science at the

University of Maine in Orono, ME. Vtuber fan of 4 years, 0 years of human subject

research.

Responsible for compiling a list of current academic literature relating to

information security and individual privacy on social media, Provide the

information I read as an information security and Individual privacy perspective to

the list of social media behavioral guidelines.

Co-Investigator: Joseph Binette

Currently a 4th year undergraduate student aiming for a Bachelor’s degree in

computer science at the University of Maine in Orono, ME. Experienced with

cybersecurity, 0 years of human subject research.

Responsible for identifying relevant creators and analyzing privacy threats among

observed individuals.

Faculty Sponsor: Sepideh Ghanavati

(Professor, we took this affiliation + qualification info from your webpage,

<https://www.sepidehghanavati.com/>.)

Associate professor in Computer Science at the School of Computing and

Information Science (SCIS) at the University of Maine and the director of the

Privacy Engineering - Regulatory Compliance Lab (PERC\_Lab). Also the faculty

affiliate of the Canadian-American Center and a researcher at the University of

Maine Artificial Intelligence Initiative (UMaine AI) center. Recipient of 2023 NSF

CAREER Award, 2018 Google Faculty Research Award, and 2021 Google’s

Privacy-related Faculty Award.

## Participant Recruitment:

Participants will be vtubers that livestream or post recorded content on the internet that

also regularly use SNS services. Expected number of vtubers to be analyzed is between

5-10. 5-10 vtubers is the range chosen due to the limited amount of time available for this

study. We will limit the vtubers analyzed in this study to only vtubers we can confirm

through publicly available information to not be members of protected populations as

listed in the University of Maine Policies and Procedures for the Protection of Human

Subjects of Research and the Common Rule.

For this study, we are analyzing individuals that livestream or post recorded content on

Twitch, Youtube, X, or Reddit using a digital avatar and are not members of protected

populations as listed in the University of Maine Policies and Procedures for the Protection

of Human Subjects of Research and the Common Rule.

## Informed Consent:

This study will only use publicly available information that vtubers have posted previously

to Twitch, Youtube, X, and Reddit. This information is publicly available to anyone for free

and we will not be obtaining consent to access it.

## Confidentiality:

The individuals whose publicly available information used in this study will be kept

pseudonymized in the paper for the sake of telling individuals apart from each other only

when absolutely needed, if no need exists, they will be kept anonymous. In our list of

guidelines, the guidelines will be written in order to not have any connection to specific

Incidents or individuals that led us to write the guideline. No IP addresses will be collected

at any point in our study.

## Risks to Participants:

While creating a list of guidelines for vtubers’ social media safety, there is a risk of

creating a collection of individuals with a history of security vulnerabilities that malicious

actors can use to easily find vulnerable targets along with how they are particularly

vulnerable.

When writing a guideline, record of the vtuber that is associated with the guideline is kept

for the purpose of being able to return to the news article, vtuber clips, or other source

used, and will only be kept for the duration needed to write the guideline. When finished,

all records of the vtuber and the security incident will be deleted and the guideline will

stand alone without association with the vtuber or the security incident.

Doing this, since there are only two individuals working on this project, at most,

only two vtubers will be at risk of association with security incidents at a single

moment.

One person will not work on any more than one guideline at a time in order to limit the

number of vtubers associated with security vulnerabilities.

Record of vtubers associated with security vulnerabilities will be kept on a google doc only accessible by the two investigators with access not given to anybody else until the list of guidelines is ready for release and distribution (without any mention of individual vtubers or security incidents). There will be no further record stored with all records made sure to be deleted by December 13, 2024.

## Benefits:

Since there is no interaction being done between investigators and vtubers, there is no

direct benefit for being involved. However, the overall potential benefit of this research

is the production of an easily distributable, specialized set of behavioral guidelines one

could follow to improve their individual privacy and information security on social media

websites.

## Compensation:

There is no compensation for anyone involved in this research.

## References:

Silic, M., & Back, A. (2016). The dark side of social networking sites:Understanding phishing risks. *Computers in Human Behavior*, *60*, 35–43.<https://doi.org/10.1016/j.chb.2016.02.050>

## 