Markuss Davis Skrastins

Formative draft outline of background and literature review

# Direct interaction of a mobile phone and a PC display

# Background

For multiple decades there have been propositions for a simple system, that would allow to operate a computer by manipulating a live video feed that is taken from a camera of another device. Even though such propositions date all the way to 1990s, no such systems have been observed to fully exist in either industrial, commercial, or private sectors. Such systems have been researched and implemented multiple times during 2010s, however there still doesn’t seem to be any popular use for them. However, today it is almost a given, that everyone has a smartphone with a good quality camera unlike 20 or even just 10 years ago. Furthermore, more public (airports, public transportation, malls etc.) and private places have interactive displays than ever before.

A system that would allow to control a computer from any device by just pointing the camera at a computer’s display would give a user a full control of any computer. This would increase users’ ability to interact with any system without having a direct access to the physical unit easing the usability in such cases as presentations, interactive displays in public spaces and even a personal computer. Moreover, combining this with an ongoing pandemic, it would also make interactions with any public systems (ATMs, interactive navigation displays etc.) safer, as it would be possible to use them without a physical contact.

In this project, such a system and its implementation are researched. Although one of the challenges for such a system to be widespread is the connectivity between a display and a phone, the focus of this paper is the interaction between a display and a phone- matching video feed from a camera to the display and being able to control the computer from the phone. Previous attempts for this kind of system usually used pattern-based matching algorithms to match the video feed to the display. However, what I will do is use CNN AND MACHINE LEANRING LETS FUCKING GOOO BOYZZZZ

# Literature review

There have been multiple different attempts over the years for an easy and intuitive use case of controlling a PC’s display by using a smartphone’s camera.