Communication Systems in Context of New Technology

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Samuel Ting
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In Collaboration with:
Damon, Caestaro,
Hunter Williams,
Kane Lee,
Pranay Dubey,
Evan Typansky,
Michael Laterza,
Michael Wood

On my honor as a University Student, I have neither given nor received
unauthorized aid on this assignment as defined by the Honor Guidelines
for Thesis-Related Assignments

Signature_____ Date_____
          Samuel Ting

Table of Contents

Samuel Ting

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Socio-Technical Synthesis

Communication tools have been an important part in building societies, and as time has progressed, technologies have been created in order to facilitate communication. Major breakthroughs in communication technology have started with things such as telegrams, and radios. As the internet age is ushered in, people can communicate in more ways than ever before. Microsoft's Tay chatbot was a venture into utilizing Artificial Intelligence to train Tay into better conversing artificial intelligence. This sort of knowledge could be extended into the growing amount of AI chat service agents and assistants that are starting to come out. The Staunton Makerspace was facing different conflicts involving their communication, with certain members of the space being less willing to check other forms of messaging like email and Slack, and were missing important group announcements. Both of these play into the communication technology space, as they both faced different challenges surrounding the use of technology to facilitate and improve communication between people.

In the Technical portion of the thesis portfolio, we created a new system to allow the users of the Staunton Makerspace to send messages to each other that focused around a centralized kiosk to minimize effort needed to see these messages. Since all the members of the Makerspace physically relied on the space to do a lot of the creation, the leadership could expect almost all members to regularly go to the Makerspace. With this idea in mind, we developed a system that would allow the users to scan their id tags when they arrive at the Makerspace, and automatically have their messages displayed on a kiosk to them. This lowered the barrier for more technically challenged or unwilling members to receive correspondence

from the leadership and will allow the leadership to better inform the membership of their decisions.

In the STS Research section, I investigated the unethical behaviors Microsoft exhibited when creating their Tay chatbot, against the guidelines for AI messaging bots that Microsoft created as a result of that failure. By showing how Microsoft acted unethically with their chatbot, I helped to demonstrate the importance of the guidelines released, as well as provide insight into how they were created from the failure of Tay.

In working on the thesis portfolio, a key takeaway from the projects was the focus on accessibility in creating new technology. As someone who has always focused on the cutting edge of technology, doing this research provided insight into the different ways people use technology in their daily lives. Seeing how the developers of Tay did not expect for it to fail as much as it did, intending on having it be a strong learning tool, gave insight into the way we should develop our communication app. We needed it to be easily accessible for those in the Makerspace who are less knowledgeable about technology, and reduce friction for their access of information, but also make it resilient and not exploitable for the vast range of knowledge and skill of all the members of the Makerspace. Doing the two projects concurrently provided valuable insight into how to properly develop the application safely and securely as to not be exploited, like Tay was, but also as accessible as possible for all users to take advantage of.