Piedmont Master Gardeners Help Desk Ticketing and Wiki System

(Technical Report)

Regulation of Artificial Intelligence in US Internet Law

(STS Research Paper)

An Undergraduate Thesis Portfolio
Presented to the Faculty of the
School of Engineering and Applied Science
In Partial Fulfillment of the Requirements for the Degree
Bachelor of Science in Computer Science

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May 7th, 2018

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Sociotechnical Synthesis

The interconnectivity of our world has grown exponentially as the result of an ever expanding web of electronic communication. Vast networks of people and information have been developed through the powerful technologies provided by tech companies such as Google and Facebook. Furthermore, as companies and non-profit organizations grow it becomes imperative to create an electronic database in order to house the information that they collect. Both my technical and STS research focus on the necessity of this technological transition and what that means for users and businesses in terms of convenience, exposure, and censorship.

In my technical project, my team and I helped a local government non-profit, the Piedmont Master Gardeners (PMG), transition from a paper-based database to an online electronic file system. The PMG are a group of volunteer organizers who answer questions from the local Charlottesville and Albemarle County gardening communities about horticulture, and provide free lab analysis and solutions at their "Horticulture Help Desk." Our group met with the PMG volunteers every other week to discuss plans for the system. There they provided us with specific details of how they wanted the site to look, what functionalities it should have, and how users and volunteers should be tracked with each question or ticket that was submitted. Our final product allows for automated tracking of anonymous demographics of their clients, a ticketing system for questions that are asked, the ability to pull emails straight from their accounts and convert them into tickets, the ability to track volunteers and events that the group has attended, and a categorical wiki that can be searched for information and answers to previous tickets. Prior to this system, the PMG kept dozens of binders of emails, notes of phone calls, and

plant material that was sent to them. They also had paper forms for clients to fill out so that the organization could receive funding from the government.

My STS research shifts the focus from the necessity of moving all of our information online to how that information is handled by the largest data collection conglomerates. Specifically, my research concentrates on how the artificial intelligence (AI) industry, especially online, can and must be regulated to keep the privacy and liberty of individuals secure. AI has been used on social media and forums to craft public discourse, spread disinformation, target individual users, and even censor comments and posts. First, I looked at specific AI development programs, their mission statements, and their results. This was to establish that the problem was real and present, and likely to worsen without legislation. Next, I reviewed court decisions, expert opinions, and law journal articles to see how online AI could be regulated to protect real users from potential harm. I combined this with Actor-Network Theory to see the interconnected web of actors that would be involved in making the regulatory decisions, as well as to see who would be most affected. Finally, I tied it all together by proposing a solution that takes ideas from the Harvard Law Journal and the Stanford Project. The solution first suggests that the primary danger to address with regulation is not the AI itself, but rather the misuse of AI. The largest corporations can and have used AI to craft online discourse to push their own agenda. This is a major threat to the recognized rights to freedom of speech, press, and expression. To prevent this, the largest AI developers, who also happen to be the gatekeepers of all online information, must be targeted directly with regulatory action.

My project shows the great potential and necessity for technological advancement on the small scale, and my research shows how that need can be controlled and abused by the most powerful actors in the big data network. It is therefore necessary and proper that regulatory measures be taken by the government to protect the small businesses from the largest entities that control the flow of all available information. This regulation would ameliorate the current problems in the AI industry in the short term. In the long term, solutions must minimize the need for government intervention by promoting competition in the interests of the consumer and the defense of human rights. No corporate or governmental entity should be above respecting the rights of the individual. Future researchers should look into how we can create stable long term solutions in an industry that is predicated on controlling and disseminating thought.