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STS 4600

Socio-technical Synthesis: Ethical Evaluation in Technological Development

My technical work and my STS research both explore the development of new technology and the considerations that must be made during and after that process. My STS research paper utilizes the ethical framework of utilitarianism to evaluate the outcomes of a new municipal operation and my technical work reflects on the actual implementation of a software redesign. Both works discuss the array of choices made during the technological development process, but differ in that my STS research focuses on the ethics of these decisions whereas my technical work reflects on the different skills utilized.

My technical work is a reflection of my internship experience at the company Yext, where I acted as a project manager during the redesign of the company's Consulting Inventory. The Consulting Inventory is a database of completed client projects that consultants could reference and build upon for new projects. The existing Inventory was outdated and difficult to navigate, so two other interns and I planned, organized, and carried out its redesign so that it could be a more useful tool for consultants. Having a background in computer science rather than project management, I assessed my ability to apply technical skills during the process - for example, utilizing database organizational knowledge. I also recognized the importance of soft skills in this role and reflected on my growth in such areas as communication.

My STS research evaluates the ethics of gender-equal snow plowing in Karlskoga, Sweden, using the framework of utilitarianism. Utilitarianism is the view that the morally right action is the action that produces the greatest good for the greatest number of people. Women on

average have different travel patterns than men and are statistically more likely to be pedestrians, so the town's traditional snow removal method disproportionately favored male travel. Karlskoga revised its snow removal methods to give priority to areas around schools, sidewalks, and bus stops. These changes ultimately reduced slippery accidents, saved money for Karlskoga, and improved accessibility, supporting my argument that gender-equal snow plowing is more utilitarian than traditional snow plowing.

Researching the outcomes of Karlskoga's snow-plowing redesign affirmed the importance of considering the ethical implications of technological development. Although my technical project of overhauling Yext's Consulting Inventory did not have a comparable impact on the public, it helped me understand where in the development process such ethical consequences can be addressed. Engineers should be in the habit of continually evaluating how their design choices impact end users, especially in verifying that the technology meets ethical guidelines. Ideally, this should be done during the implementation process, promoting an active assessment of outcomes for any technology deployed as part of an engineer's repertoire of soft skills.