

Software Ethics Course Proposal

(Technical Report)

Investigation of Relevant Social Groups in the FBI vs. Apple Dispute

(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

By

Steven Yi

May 11th, 2021

Sociotechnical Synthesis

The technical aspect of this project proposes a new course in the UVA Computer Science curriculum that focuses purely on software ethics. This addresses an inadequate focus on engineering ethics in technical education, while also focusing on topics and ethical dilemmas specific to software engineering. Because of software's increasing relevance in our life, it is important to consider the ethical implications of all software being released, and I hope that (at least theoretically) the course would be able to bring out more education, and help future software engineers bring more ethical practices into their professional work, using case studies and discussing ethical implications of software design decisions. The STS portion is a case study of the controversy between Apple and the FBI over the San Bernadino shooter's locked iPhone, and is analyzed through the Social Construction of Technology (SCOT) framework, using case briefs and other legal documents for evidence. I hope that this research can point back to the course proposal, showing a real-world example of an ethical dilemma in software technology, thus demonstrating the kind of ethical considerations that software engineers must be aware of in their engineering practice, as well as the need for increased ethical awareness in software engineering.