

Proposal for a New Course in Computer Science: Ethical Challenges in
Technology
(Technical Report)

The Struggle over YouTube's Recommendation Algorithm
(STS Research Paper)

An Undergraduate Thesis Portfolio
Presented to the Faculty of the
School of Engineering and Applied Science
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Bachelor of Science in Computer Science

by

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Preface

Innovative technologies are often intensely controversial, and responsible software engineers must consider how product development affects the public good.

At the University of Virginia, there are no required courses in the computer science curriculum focused on modern-day computing ethics. Students seeking professional careers in software development are ill-equipped to measure the impact of public-facing industry work. A new course offering, *Ethical Challenges in Technology*, will provide high-level overviews of ethical issues in computer science. The course will prepare students to evaluate the social implications of computing technology.

How have the critics and defenders of YouTube's recommendation algorithm strived to advance their agendas? In recent years, the video-sharing platform has faced intense criticism for its ability to spread misinformation. However, independent researchers have struggled to quantify the algorithm's role in disseminating harmful content, and YouTube policies have evolved to address shifting public perception and business priorities.

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