

Preparing CS Students for the Future: How Can a Required Cyber Security Course  
Better Prepare Undergraduate CS Students  
(Technical Report)

Balancing the Scale: Finding Common Ground on Internet Privacy  
(Sociotechnical Research Paper)

An Undergraduate Thesis Portfolio  
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Bachelor of Science in Computer Science

by

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## Preface

How can we find the optimal blend between digital privacy and digital utility?

How can a required Cyber Security course better prepare undergraduate CS students for the demands they will face, regardless of their specific field? With an estimated \$10 billion lost yearly due to cyber attacks, cybersecurity has become an important issue in the United States. However, it seems that workers are not adept when it comes to this. To combat this, cyber security needs to become more prominent in computer science education. I recommend that a new cybersecurity training course be required as a part of the UVA CS curriculum. This would enable students to gain a better understanding of threats and the skills needed to create safer software.

In the US, how do e-commerce enterprises, data collectors, and privacy advocacies compete to draw the line between permissible and impermissible collection of personal data online? What permissible data collection has been heavily debated with no real answer. Companies and consumers have been at odds on what should and should not be permissible. To find a balance between the two, transparency, accountability, and regulation all must be improved. This will allow for greater trust between companies and consumers which will lead to consumers more willing to give up data.