

## **Thesis Project Portfolio**

### **Improving Service in Restaurants with a Smart Coaster**

(Technical Report)

### **The Battle over End to End Encryption and The EARN IT Act**

(STS Research Paper)

An Undergraduate Thesis

Presented to the Faculty of the School of Engineering and Applied Science

University of Virginia • Charlottesville, Virginia

In Fulfillment of the Requirements for the Degree

Bachelor of Science, School of Engineering

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## **Sociotechnical Synthesis**

Encryption is critical to securing technology products. End-to-end encryption is the safest way to secure data as it reduces the number of parties who may break the encryption (EFF Surveillance Self-Defense Guide). Unfortunately, there are indirect consequences from E2EE; certain crime detection and investigative efforts would be impeded. When implementing encryption, engineers must balance tradeoffs, security, privacy and public safety, as well as stakeholders, users and the general public.