

## **Thesis Portfolio**

Smart Charlottesville: Designing the Future  
(Technical Report)

The Societal Impact of Blockchain  
(STS Research Paper)

An Undergraduate Thesis

Presented to the Faculty of the School of Engineering and Applied Sciences  
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**

Blockchain is an extremely innovative and disruptive technology. It allows data to be stored in a decentralized way while also being unchangeable. While this sounds very simple, the effects are massive. We have already seen a rise of cryptocurrencies that is only possible due to this technology, and this is only one small impact of blockchain. This could lead anywhere from the decentralization of content that is currently on Netflix or YouTube to helping establish property laws in poor countries to assist them in growing their GDP. The impact blockchain could have on people's lives across the world is massive, and many people, governments, and companies are putting money into researching this technology to determine how it could help them achieve their goals. These goals often contradict each other, so it will be interesting to see in the future who is able to really take the lead on the future of blockchain. The government will most likely really start to try and guide the growth of blockchain technology towards where they want it to be through anticipatory governance. They are not huge advocates for the decentralized nature of blockchain, though the security is much greater. Something being decentralized makes criminal activity much easier and makes a technology or industry much harder to regulate. It remains to be seen how the government views blockchain, and what they will do to make sure the technology serves society in the best way possible.

Blockchain is still in its early stages, having mainly been used for cryptocurrency so far. However, a plethora of money is getting spent on research right now, giving blockchain technology a good chance to have a massive impact on our society and the world in the very near future.