

Thesis Project Portfolio

**Analyzing Fashion Trends across Popular Culture Media Sources and the Subsequent
Trend Classification of Secondhand Clothing Articles**

(Technical Report)

**The Overconsumption of Fast Fashion:
An Analysis on the Social and Environmental Impacts of Stakeholders**

(STS Research Paper)

An Undergraduate Thesis

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

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Executive Summary

Connection of Projects

These two projects came together as an attempt to better understand and address the social and environmental problems caused by the fast fashion industry. The STS project looks to understand and explain the fast fashion industry through the lens of those ingrained within it, subsequently addressing the problems that arise in its wake. The technical capstone project exists to introduce emergent technology and its uses to secondhand retailers, a more ethical competitor of the fast fashion industry. By encouraging the public with the results of both research studies, our society will be better equipped to make ethically sound decisions moving forward.

Capstone Project Summary

The world of secondhand clothing resale suffers from much greater ambiguity and variety in their product than their fast fashion competitors, which creates a disconnect between the consumers and the product. Without standardized information about the product for sale, automated marketing techniques like user recommendations become more difficult. As many secondhand clothing retailers rely on individual sellers utilizing their platforms, acquiring standardization information across product listings is nearly impossible. Certain machine learning techniques might provide the ability to process these product listings in a fashion conducive to better marketing. By creating a recommendation system for products, consumer behavior and demand can be better processed and understood to ease user experience. More specifically, this research proposal suggests the use of reinforcement learning to better grasp user preferences, and then subsequently cluster similar users to provide recommendations based on the reactions of the group.

STS Research Paper Summary

The rise of consumer demand for trending fashion items has led to a cycle of ethically and socially reprehensible consumption. As fast fashion industry giants lean into business practices focused on expediting the clothing both into and out of end user wardrobes, exploitation becomes a primary tool of the trade. The exploitation of the laborers in low to middle economic countries who work in unsafe conditions, the exploitation of the ecosystems harboring the waste and pollution, and the exploitation of the consumer are all going to be explored in this research.

To investigate the issues at hand, the research is primarily oriented about how trends in consumer behavior regarding the consumption of fast fashion impact producer-consumer dynamics, relevant social groups, and the environment as a whole. In doing so, the Actor Network Theory framework will be utilized to better understand the motivations behind each party involved.

Ultimately, in delving deeper into the rationale behind actions of the key actors responsible for the overconsumption of fast fashion, the ethically responsible choices for each party can be better understood. From these insights, relevant policy can be reviewed to ensure actors behave responsibly, and the individual consumer can be better aware of the implications of their purchases.

Reflection

By accomplishing these projects in tandem with one another, I was better able to understand the problems surrounding the fast fashion industry on varying levels. The expansive nature of the STS research allowed me to view the problem from the lens of key actors, which spans the consumer, who buys the product off the rack, to the producer, who works in hazardous environments to scrape by. The technical capstone then allowed me to look at the barriers that prevent the average competitor from breaking into the market and beating the fast fashion

industry. Ultimately, this showed me the emphasis that is placed on the consumer. It is up to each person at the end of the supply chain to make ethically sound decisions in order for any change to occur.