Thesis Portfolio

Identyti: Digital Storage of Personal Identification Documents

(Technical Report)

Ecommerce's Effects on Consumer Behavior and Marketing

(STS Research Paper)

An Undergraduate Thesis

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Sociotechnical Synthesis

The rise of ecommerce has made user data an important component in a retail company's success. Identyti, the online document hosting service, similarly, relies on user data to make and improve its autocategorization of user uploaded files. Both retail marketers and Identyti potentially have at their disposals, sensitive user data that warrants privacy concerns. Also, since both retail marketers and Identyti both aim to automatize human decisions such as in selecting what shoppers see and Identyti's automatized document filtering system, they lead to an unprecedented attrition of users' self-determination. On the technical side, both ecommerce platforms and Identyti are challenged to manage and facilitate analysis on mass user data in some way.

Identyti is a data hosting service for documents that otherwise typically only exist as a hard-copy. Often times, people have to shuffle through various papers to retrieve what they need. Also, people do not always immediately know what documents a party may be requesting. Identyti seeks to solve both these problems by allowing users to upload their documents online so that they may be accessed from anywhere and anytime. Identyti utilizes users' uploaded documents by training a machine learning module that assists to auto-categorize and thereby organize documents for users. Since most documents tend to be forms that hold sensitive user information, the backend was left to S3 which is a long-term data hosting platform by Amazon that is universally well trusted and the most used among all cloud storage solutions.

Another major component of Identyti lies in Identyti's enterprise accounts, which serves only to request documents from user accounts. A person could register for an enterprise account by contacting Identyti by email which would then upon approval send a registration code. The enterprise account could then be able to request documents from a user by sharing a fillable

form. When the user uploads the requested document, the enterprise account would then receive a notification of completion. The sharing operation of documents is also available for users.

As ecommerce continues to grow, consumers now more than ever have virtually a limitless supply of different online retailers at the disposal of their internet connecting devices. Consumers are no longer faced with physically commuting to brick and mortar stores to make purchases. Even the common routine of getting groceries at supermarkets is threatened by the likes of Amazon and Walmart offering grocery deliveries. This great shift towards online retail poses the question as to how consumer behavior is changing. Technological determinism is demonstrated by the fact that the advent of ecommerce is changing the means for which consumers are shopping and ultimately how they shop.

With so many online retailers at the grasp of a user's fingertips, ecommerce platforms are faced with finding new ways to standout. The utilization of user data in enhancing online marketing opens the controversy of user privacy and the attrition of a user's right to self-determination. Ecommerce's efforts in making online shopping more social via chat boxes, online endorsements, and recommendation systems, also demonstrates the sociological aspects of shopping and perhaps in general what persuades consumers to make the purchases that they do. Technological determinism is exhibited in how marketing technologies are directly impacting what consumers see, buy, and think. Examining how some ecommerce platforms are able to successfully fabricate social influence such as in shopping trends, should reveal how user data can play a major role in guiding user purchases.

By working on both projects simultaneously, a deeper knowledge in how important user data was found. Machine learning for both Identyti and Ecommerce platforms make guessing user preferences more of a math than a guessing game. Although, the STS Research Paper did

not delve much into the technical aspects of facilitating user data, much was learned from Identyti in how software was both be able to extract text from image files and process user data to target user trends. On the other side, working on Identyti alone would have left much of the social implications that came along with harvesting mass user data. In designing Identyti's user interface, much was learned about user preferences on how websites should look and where certain elements should be placed. Likewise, in examining the effectiveness of various online marketing techniques, a general idea of what appeals to shoppers was explored.