Lily Schwarz
Senior Design
Pablo Frank-Bolto
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Writing Assignment 1 - Project Summary

The world is currently facing a climate crisis. In order to combat this climate emergency, we need to take action now. We must do everything in our power to reach a more sustainable future, and all of our choices have the potential to impact the future of our planet. This includes the way we shop. With so many convenient online shopping options today, it is easy to move through life without considering the horrible environmental impact of Amazon's one-day shipping. To help solve this problem, our team has come up with Pachira. Pachira is a browser extension that aims to increase the sustainability of online shopping in a world increasingly embracing e-commerce. When wastefully online shopping, Pachira uses machine learning to suggest local alternatives with a lower environmental impact. Pachira is a cross-browser compatible, secure extension that aims to help users improve their consciousness about making sustainable purchases by allowing users to set goals.

Pachira allows users to save time while shopping sustainably. Instead of spending hours scouring the internet for more environmentally-friendly alternatives, Pachira does it for you. Through using web scraping technologies, Pachira takes all of the items in your online shopping cart and produces a list of local stores that have your items in stock. Shopping locally is a crucial step in reducing carbon emissions, not to mention helping your local economy flourish.

In order to determine the environmental impact of each item in your shopping cart, Pachira uses machine learning to score each item by metrics of the transit distance, packaging, and how eco friendly the product itself is. The scoring algorithm will rate how sustainable your online shopping cart is, and Pachira will provide suggestions as to how the sustainability score can be improved.

Due to the nature of Pachira storing many of the user's preferences, security is of the utmost importance. Browser extensions are notorious for lacking security measures. Upon downloading, the user is prompted with a permission request to access data, and even then Pachira will use the minimum amount of user data necessary to function. Users are required to make Pachira accounts with secure passwords for authentication. Ultimately, the most secure methodologies are utilized in the makeup of Pachira.

Although online shopping from massive companies is incredibly convenient, the damage it has done to the planet is detrimental to our futures. We've created Pachira with the mindset of still wanting to shop in a way that is quick and convenient by allowing users to find local, more environmentally friendly options with the click of a button. In order to create major societal change in the way shop, we need a tool that is quick and easy to use. Pachira is exactly that.