A Web Application to Examine the Environmental Impact of Consumer Textiles and Provide Climate-conscious Recommendations

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The rise in consumption of goods and emissions from the economy has been increasing. As the incentive to go for a more sustainable lifestyle is low from consumers, producers are not shifting to a greener economy. We propose a web application that allows consumers to check the climate impact of a product online before purchasing the item. The user pastes the URL of the product they wish to buy. The web application then extracts the description from the product page and highlights the materials used. The materials used are inputted into our python program which calculates the climate impact caused by the item which is displayed as a rating. Different materials in product categories are converted into numerical values that are used to determine the rating. These numerical values are based on the LCA(Life Cycle Assessment) of the materials or products which account for the emissions throughout the life of the material or product. In the case that the user is intending to buy a product that is not climate-friendly, recommendations of other climate-friendly alternatives are provided which are personalized so that similar products are recommended. Statistics show a 35% increase in buying eco-friendly clothes when recommended to them directly. A framework was created to expand to other product categories and update information, this allows for expansion and scalability. Our application combines these functions to solve the problem of promoting a more climate-friendly lifestyle to consumers while providing demand for more sustainable products without affecting the producers business.

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