TrusTorch.Ext

Illuminating Ethical Commerce

DARK PATTERNS BUSTER HACKATHON 2023

Problem Statements Being Addressed:

- *User Interface Deception:*

  It should be able to spot instances of user interface deception, which is when e-commerce websites use deceptive user interfaces to trick or perplex users into taking unintended actions.

- *Fake Urgency and Scarcity:*

  The solution should be able to detect instances where e-commerce sites use fake timers or stock level indicators to create a false sense of urgency and scarcity.

- *Dark Patterns in User Reviews:*

  The solution should also scrutinize user-generated content (reviews and ratings) for signs of manipulated or fake reviews meant to deceive potential buyers.

MENTOR: Dr. Abishi Chowdhury (abishi.chowdhury@vit.ac.in)

TEAM:

Joshua Sakthivel Raju (22BAI1213)

Amritanshu Tripathy (22BAI1367)

Shantanu Wani (22BAI1403)

Tanushree Chowdhury (22BLC1077)

Ayan Biswa Dutta (22MIA1031)

ABSTRACT

In the dynamic realm of e-commerce, where trust is paramount, the TrusTorch browser extension emerges as a beacon of transparency and integrity. This innovative solution addresses two pivotal challenges outlined in the Dark Buster hackathon problem statements: the prevalence of fake reviews and the creation of false urgency and scarcity through deceptive tactics.

Choosing a browser extension over an app or website for TrusTorch in our opinion is a strategic decision rooted in user convenience and seamless integration into the online shopping experience. An extension offers a

lightweight, accessible, and non-intrusive solution that seamlessly integrates with users' existing web browsers. This ensures a frictionless experience, allowing users to effortlessly activate Trust Torch's protective features while navigating e-commerce websites, without the need for additional installations or disruptions to their accustomed online routines while ensuring real-time alerts and protection against deceptive practices.

TrusTorch is designed to scrutinize user-generated content, specifically reviews and ratings, to reveal signs of manipulation or fabrication meant to deceive potential buyers. Leveraging advanced Natural Language Processing (NLP) algorithms, the extension performs real-time analysis, alerting users when encountering products tainted by fake reviews. This capability empowers users to make informed decisions and navigate the e-commerce landscape with confidence.

In addition to combating fake reviews, TrusTorch is capable of detecting deceptive tactics employed by e-commerce sites to create a false sense of urgency and scarcity. By identifying instances where fake timers or stock level indicators mislead users, the extension provides users with insights into authentic product availability, fostering a more discerning and empowered consumer base.

TrusTorch goes beyond its primary functionalities to address the influence of sponsored content on user perceptions. The extension strategically highlights products sponsored by the website, enabling users to navigate potential biases associated with product placement, and hence contributing to a more transparent online marketplace.

In response to the common deceptive practice of displaying prices, Trust Torch employs a straightforward remedy. Our extension ensures clarity and fairness by rounding off these values to the nearest appropriate upper figure. For instance, Rs.1999 is rounded up to Rs.2000. This simple adjustment aims to eliminate confusion and prevent users from falling prey to manipulative pricing strategies.

Understanding the diverse needs of users, TrusTorch incorporates intelligent sorting mechanisms. Products are categorized based on delivery dates, allowing users to prioritize purchases according to urgency. Moreover, the extension introduces a unique sorting approach by arranging products in descending order based on a calculated ratio of reviews to ratings. This innovative feature enables users to efficiently identify high-quality products, streamlining the decision-making process.

In essence, TrusTorch.Ext is not merely a browser extension; it's a commitment to a trustworthy and user-centric online shopping experience. By seamlessly integrating advanced technologies, including NLP, and introducing a myriad of features to combat dark patterns, TrusTorch sets new standards for ethical e-commerce practices. As we navigate the digital marketplace, TrusTorch stands as a guardian, illuminating the path towards a more transparent, reliable, and consumer-friendly online shopping ecosystem.