ECommerce Dark Pattern Detector DPBH 2023 Team Algo Allies

Our Team

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Problem Statement

E-commerce websites often employ deceptive user interface (UI) strategies, commonly known as dark patterns, to influence user behavior in ways that may not be in the user's best interest.

E-commerce platforms sometimes employ strategies to present products at a seemingly lower price, only to reveal hidden costs during the checkout process.

Fabricating positive reviews to artificially enhance product ratings and create a false sense of popularity, influencing potential buyers in a misleading manner.

Problem Statement

Providing inaccurate or incomplete product information to make items appear more appealing than they truly are, potentially leading to customer dissatisfaction.

Some websites use fake countdowns and urgent messages to pressure you into buying quickly.

When browsing certain websites, it's common to encounter a practice where important information is deliberately presented in a smaller font.



Solution

User arrives on a website and activates the extension

Verification of user attention on the details page; lack of visibility triggers identification of potential dark patterns

Detection and highlighting of Fake Urgency elements on the product page

Application of Al filters to remove Al-generated reviews from the page

Filtered reviews are sent to an open-sourced Large Language Model for comparison with website details

Users are provided with a clear metric for evaluating the genuineness of product feedback

Extension begins intelligently tracking the user's journey from the product page to the checkout

Examination of the product page to assess the visibility and placement of crucial details

Creation of specific keywords based on identified Fake
Urgency elements

Keywords are matched against the website text to identify instances of Fake Urgency

The LLM attempts to extract relevant details from user reviews

Misleading reviews are removed, and potential misinformation on details page are marked

The monitoring of user flow was essential to identify and subsequently detect hidden costs on the checkout page, ensuring users are informed about the complete pricing structure

Key Features

Our Chrome extension goes beyond conventional review filtering, employing a multi-faceted approach distinguish genuine feedback from deceptive Al-generated content.

Filter reviews and eliminate Al-generated content. Submit filtered reviews to the Machine Learning Model, extracting details mentioned on the website. Assign a comprehensive score to each detail, gauging its genuineness and effectively eliminating misleading information.

Enable the extension and seamlessly track your journey from the product page to checkout. Uncover hidden costs on the checkout page, providing users with transparency and avoiding unexpected charges.

Key Features

Highlights elements of fake urgency on the product page using keyword analysis. Match and analyze text from the website to expose deceptive tactics, ensuring users make informed decisions.

On the product page, scrutinize details and mentions to highlight potential dark patterns. Ensure that critical information receives user attention, eliminating deceptive tactics that may go unnoticed.

Feasibility

Seamlessly integrates with browsers for a hassle-free user experience, requiring no intricate setup or technical expertise.

Provides instant, on-the-fly analysis, empowering users to detect deceptive practices in real-time during their online shopping journey.

Boasts an intuitive and user-friendly interface, ensuring accessibility and ease of use for a wide range of online shoppers.

Offers regular updates and reliable support to adapt to evolving online trends, ensuring users consistently benefit from the latest features and security enhancements.

Scalability

Design a scalable architecture that accommodates increased user traffic and evolving functionalities as the user base expands.

Leverage cloud services to ensure scalability, allowing our solution to effortlessly handle growing data volumes and user demands.

Utilize user feedback for continuous improvements, iterating and enhancing the solution to meet evolving user needs and market demands.

Partnering with e-commerce platforms streamlines dark pattern detection, minimizing resources and fostering beneficial relationships with stakeholders.

Social Impact

Empower consumers with the ability to make informed choices, fostering a marketplace where transparent and fair practices are encouraged.

Contribute to a more honest and trustworthy online retail ecosystem by actively combating deceptive practices, creating a ripple effect for ethical conduct.

Strengthen trust between online retailers and consumers, encouraging a positive environment where businesses prioritize transparency and user satisfaction.

Undertake initiatives to educate users about online deception and dark patterns, promoting digital literacy and awareness.