Dark Patterns Buster Hackathon (DPBH-2023)
Round 3 Grand Finale @ IIT(BHU), Varanasi
(Feb.17, 2024)

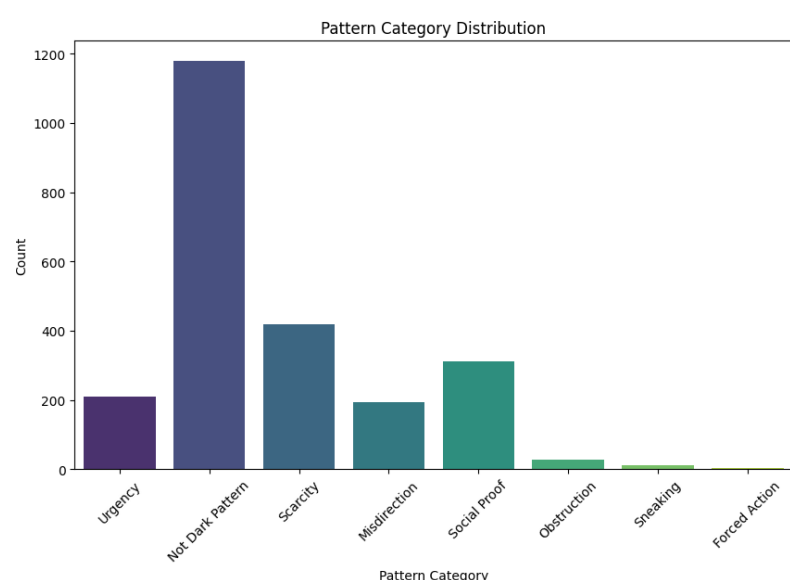| BANNARI AMMAN INSTITUTE OF TECHNOLOGY Stay Ahead	TE TEAM EXCALIBUR	SABARISH R JEEVITHA KANNAN NAVEEN KUMAR P PADMASHRI S MUGUNDHAN K V

IDENTIFY HIDDEN COST AND DARK PATTERN

PROPOSED SOLUTION

- Transparency-enhancing tool
- Real-time product data gathering
- Chrome extension integration
- Hidden cost detection
- Dark pattern identification

FEATURES

1. **Hidden Cost Identifier:** It finds any extra charges that might not be obvious during online shopping.

2. **Dark Pattern Highlighter:** This feature points out any sneaky or deceptive tactics used on websites.

3. **Dark Pattern Analyzer:** It examines the website for patterns designed to manipulate or deceive the users, providing insights into their presence.

TARGET DARK PATTERN

UNIQUENESS

Playwright for thorough data gathering and a sophisticated Bret model in Python, enabling real-time detection of hidden costs and dark patterns, ultimately empowering consumers with informed decision-making in online shopping.
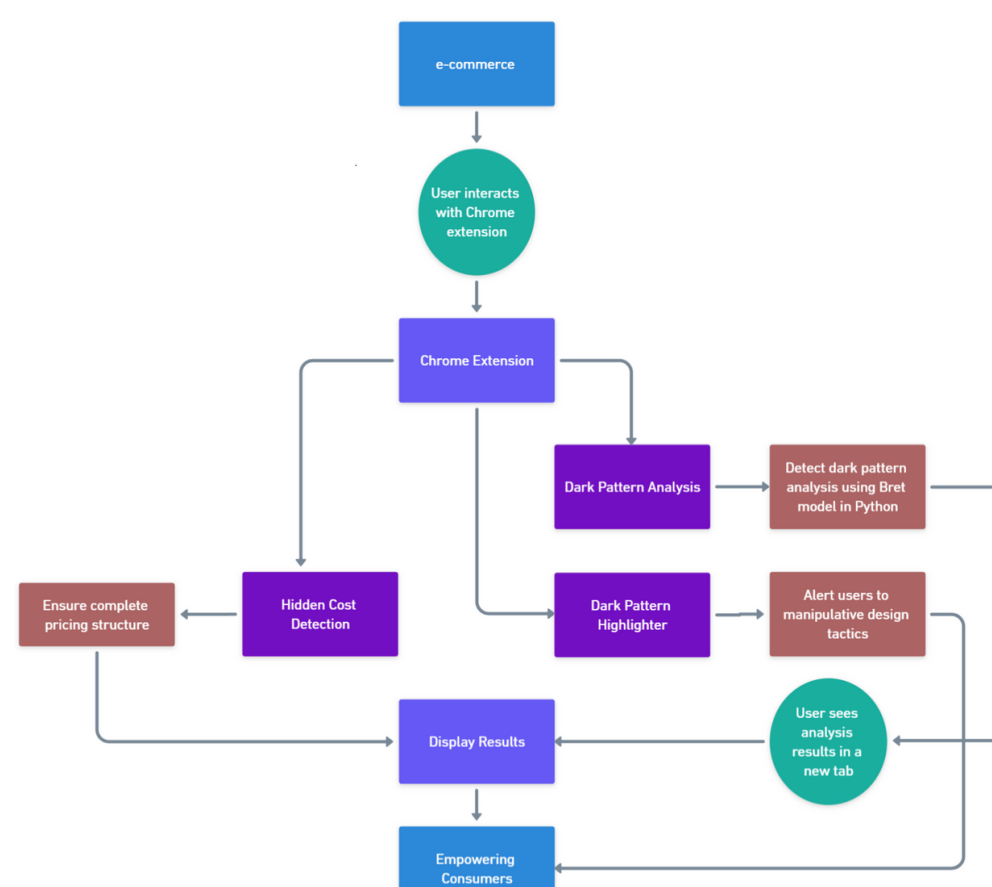
WORK FLOW

SUPPORTS

Hidden Cost Identifier

Pattern Identifier

Using BERT Model to Find Patterns

Highlighter

Difference

Detected

FLOW CHART

TECHNOLOGY STACK

FRONTEND - HTML5, CSS, JS, JSON

BACKEND - Python, Flask, Beautifulsoup

ML MODEL - Joblib, BERT, spaCy

RESULT

It offers valuable insights and analysis, promoting fairness and ethics, benefiting consumers, and fostering a more reliable digital marketplace.

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Abstract

This project focuses on enhancing transparency and empowering online consumers through a suite of tools designed to address common issues encountered during online shopping. The Hidden Cost Identifier aims to reveal any obscured charges, providing clarity to users. The Dark Pattern Highlighter and Analyzer work in tandem to flag and analyze manipulative design techniques, enabling users to navigate digital interfaces with awareness. Additionally, the Price Comparison Functionality facilitates easy comparison of product prices across platforms, empowering users to make informed purchasing decisions. Lastly, a Customer Chatbot offers support to online consumers, enhancing their overall shopping experience. Together, these components aim to promote transparency, autonomy, and informed decision-making in the online marketplace.

Team Members

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BACKEND DEVELOPER

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FULLSTACK DEVELOPER

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Impact Assessment & Conclusion

Our solution tackles common challenges in online shopping, providing users with tools like the Hidden Cost Identifier, Dark Pattern Highlighter, and Price Comparison. These features expose hidden charges, deceptive design tactics, and price variations across platforms like Flipkart, boosting user awareness, protection, and trust. Continuous refinement will be crucial for ongoing support and staying ahead of emerging threats in the ever-changing online retail environment.

Solution Highlights

Our solution enhances online shopping transparency and user protection using advanced models to detect hidden costs and reveal deceptive design tactics. It enables informed decisions through thorough analysis, uncovering manipulation patterns and offering price comparisons across platforms like Flipkart. Integrating detection, analysis, and comparison capabilities, our solution empowers users to navigate the digital realm confidently while adapting to evolving online threats.