**ABSTRACT**

**Dark Pattern Guardian: A Browser Extension for Ethical Awareness and Online Transparency**

**Authors:** A.B.Jai Koushik Reddy (217Z1A6703), K.Abhiram (217Z1A6728), J.Chandu (217Z1A6724)

**Affiliation:** Department of Computer Science and Engineering, Nalla Narasimha Reddy Education Society's Group of Institutions.

This project is a backend-focused browser extension designed to detect and report deceptive design practices, commonly known as dark patterns, on websites. These manipulative tactics—such as hidden costs, forced subscriptions, fake urgency, and misleading prompts—are often used to trick users into making unintended decisions. The extension operates entirely in the background, without any user interface components, DOM manipulation, or network request analysis. Instead, it relies on analyzing website content and structure through efficient backend scripts. Detected patterns are logged in real-time to the browser console and stored in local files for further review and analysis. By providing accurate detection and fostering ethical awareness, Dark Pattern Guardian contributes to promoting online transparency and empowering users to navigate digital spaces with confidence and integrity. This project serves as a foundation for future research and development in the field of automated dark pattern detection and ethical web design.

**Keywords:** Dark Patterns, Ethical Web Design, Deceptive Practices, Online transparency, Automated Detection

Signature of Guide Project In-charge HOD