DarkPatternHunter: Intelligent Detection of Deceptive UX on the Web

# Abstract

DarkPatternHunter is a novel browser-based extension that automatically identifies and highlights deceptive interface designs (“dark patterns”) on live websites...

# Introduction

Dark patterns are deceptive user interface tactics deliberately crafted to trick users into actions they did not intend...

# Related Work

Automated Dark-Pattern Detection: Prior work has explored detecting dark patterns at scale...

# Pattern Taxonomy

We target a broad set of known dark-pattern types. Below we describe representative categories (with definitions and examples)...

# Methodology

DarkPatternHunter uses a rule-based approach combining DOM analysis, inline warnings, and local data tracking...

# System Design and Architecture

DarkPatternHunter is implemented as a standard browser extension (tested on Chrome/Chromium)...

# Dataset Creation

To develop and evaluate DarkPatternHunter, we assembled a labeled dataset of real websites...

# Evaluation

We evaluated DarkPatternHunter on the labeled dataset and via user testing...

# Ethical and Legal Discussion

DarkPatternHunter promotes user autonomy by exposing manipulative UI elements...

# Conclusion and Future Work

We have presented DarkPatternHunter, a browser extension that automatically detects and highlights dark UI patterns in real time...