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Bhav-Tol Smart Price Comparison System

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Abstract: *The rapid growth of e-commerce platforms has significantly increased online shopping activity, resulting in price variations across multiple websites for the same product. Consumers often face difficulties in identifying the best available deal due to scattered information, inconsistent pricing, hidden discounts, and the absence of centralized comparison tools. Traditional shopping methods require users to manually browse different platforms, compare prices, analyse ratings, and check delivery details, leading to time consumption and inefficient decision-making.*

To address these challenges, this paper presents BHAVTOL, a Smart Price Comparison Web Application designed to aggregate, analyse, and display product prices from multiple e-commerce platforms within a single interactive interface. The proposed system utilizes modern web technologies such as React.js for frontend development and a cloud-based backend architecture for secure data management and real-time synchronization.

The application integrates advanced features including smart search functionality, dynamic filtering, price comparison tables, best-deal highlighting, and price history visualization. Unlike traditional price comparison systems that focus only on price aggregation, BHAVTOL emphasizes enhanced user experience, interactive design, intelligent ranking algorithms, and optimized performance.

The system introduces additional functionalities such as discount percentage analysis, savings calculation, price trend tracking, and real-time update mechanisms to improve user decision-making efficiency. Experimental evaluation using simulated product datasets demonstrates improved search efficiency, reduced decision time, and higher user engagement compared to conventional manual comparison approaches. The scalable architecture also allows future integration of machine learning-based recommendation systems and predictive price analytics.. .

Keywords: *Smart Price Comparison, E-Commerce Aggregation, Web Scraping, Cloud Computing, React.js, Real-Time Updates, User Experience Design, Intelligent Ranking*

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