



ADVANCING E-COMMERCE FOR IMPROVING SLOW PAGE RELOADS

UNDERGRADUATE THESIS
Submitted as one of the requirements to obtain
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ABSTRACT

In the dynamic realm of e-commerce, the speed and efficiency of web interactions are crucial for user satisfaction and business success. This capstone project tackles the significant issue of slow page reloads, which adversely affect user experience and conversion rates. By harnessing state-of-the-art web technologies and a user-focused design strategy, we aim to create a Next.js-powered web application that ensures quick, seamless interactions and improves overall usability.

Our solution emphasizes several critical components. Firstly, we integrate clear progress indicators and streamlined checkout steps to minimize friction during the purchasing process. Secondly, we provide multiple payment options, enhancing flexibility and reducing checkout abandonment. Thirdly, the inclusion of one-click purchases simplifies transactions for returning customers by using securely stored payment information.

Additionally, we investigate the potential of Progressive Web Apps (PWA) to deliver a native app-like experience directly through the web browser, ensuring smooth user engagement. While not the primary focus, community reviews and recommendations are also considered, with a moderation system in place to maintain the quality of user-generated content.

A key aspect of our approach is the focus on iterative improvements through user feedback. Regular feedback collection mechanisms, agile development practices, and transparent communication with users about implemented changes ensure the platform continually evolves to meet user needs and expectations.

By integrating these elements, the proposed solution aims to create a highly responsive, efficient, and user-friendly e-commerce platform. This project aspires not only to resolve the immediate issue of slow page reloads but also to set a new standard for online shopping experiences through continuous refinement and enhancement of the user experience. The expected outcome is a robust, innovative platform that significantly boosts user satisfaction and drives business success in the competitive e-commerce landscape.

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