

**REDUCTION OF PUSH NOTIFICATIONS IN E-COMMERCE
APP**

A PROJECT REPORT

Submitted by,

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*Under the guidance of,
Dr. DEBASMITA MISHRA*

in partial fulfillment for the award of the degree

of

BACHELOR OF TECHNOLOGY

IN

COMPUTER ENGINEERING

At



PRESIDENCY UNIVERSITY

BENGALURU

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PRESIDENCY UNIVERSITY
SCHOOL OF COMPUTER SCIENCE ENGINEERING
CERTIFICATE

This is to certify that the Project report "**REDUCTION OF PUSH NOTIFICATIONS IN E-COMMERCE APP**" being submitted by A P RANJITH KUMAR, YASHWANTH SAI V, JAYANTH JP, TEJVEER A, bearing roll number(s) 20211COM0034, 20211COM0041, 20211COM0046, 20221LCE0003 in partial fulfillment of the requirement for the award of the degree of Bachelor of Technology in Computer Engineering is a bonafide work carried out under my supervision.

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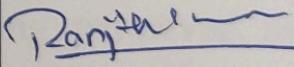
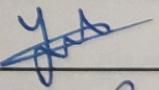
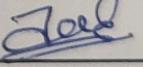
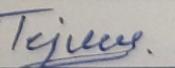
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DECLARATION

We hereby declare that the work, which is being presented in the project report entitled **REDUCTION OF PUSH NOTIFICATIONS IN E-COMMERCE APP** in partial fulfillment for the award of Degree of **Bachelor of Technology** in **Computer Engineering**, is a record of our own investigations carried under the guidance of **Dr.Debasmita Mishra, Assistant Professor, School of Computer Science Engineering, Presidency University, Bengaluru.**

We have not submitted the matter presented in this report anywhere for the award of any other Degree.

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ABSTRACT

Push and pop notifications have become an essential tool in e-commerce applications, enabling businesses to engage with users, promote products, and increase sales. However, the overuse of notifications often leads to user frustration, app fatigue, and declining engagement, ultimately resulting in app uninstalls and reduced customer loyalty. This paper explores strategies to reduce the volume and frequency of notifications in e-commerce apps without compromising their effectiveness in driving user interactions and conversions. The study focuses on a ethnocentric approach to managing notifications, focusing on overspecialization, relevance, and timing.

Businesses can leverage machine learning and AI-driven customer segmentation to analyze user behavior, purchase history, and preferences to deliver highly targeted and meaningful notifications. Dynamic delivery timing based on predictive analytics ensures that notifications reach users at the most appropriate moments, thus reducing the likelihood of being perceived as intrusive. Additional areas include the enhancement of user control by providing more flexible opt-in options, through which users can customize their types of and frequency for notification types. Silent notifications and non-disruptive in-app messages, too, are seen as alternatives to push notifications for giving users informative updates without intruding on the experience. By balancing engagement goals with user preferences, businesses can mitigate notification overload while fostering a positive relationship with users.

This approach not only improves user satisfaction but also strengthens brand trust and loyalty, leading to sustainable long-term growth. The findings of the paper present actionable recommendations for e-commerce app developers, marketers, and product managers in optimizing their notification strategies. In other words, if the number of push and pop notifications is reduced by

enhancing the quality of the notifications, higher retention rates will be achieved from customers in addition to a better-facilitated more-satisfying user experience.

Keywords: Push Notifications, Personalization, User Engagement, E-commerce Apps, NotificationOverload.

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