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A Comparative Analysis of Cross - Platform Mobile Application Development Approaches

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Abstract

React Native, Flutter, and Xamarin are the three main cross-platform mobile application development frameworks that are compared in this study report. It looks at their advantages, disadvantages, performance indicators, and fit for various use cases. Evaluation criteria include CPU performance, framework, Developer Engagement/Satisfaction, Global Popularity, and UI design skills. Benchmarks and real-world study data confirm the findings. The goal is to give developers and stakeholders the knowledge they need to make well-informed decisions on the framework to use for a given project, taking into account factors like target audience preferences, resource limitations, and project needs. The analysis advances best practices and innovation in this quickly developing field by adding to the conversation around mobile app development approaches.

Keywords: *Mobile Application Development, Cross-platform, React Native, Flutter, Xamarin, Comparative Analysis, Performance Evaluation.*