

Progressive Web Apps vs Responsive Web Apps

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Abstract: *In this research paper, we will investigate the browser compatibility of PWA features and compare and analyse the performance and memory consumption of PWA features compared to responsive web apps. In 2015, the term Progressive Web Applications was coined to describe an application that takes advantage of all the features of a progressive app. Some of the key features include offline support, an app-like user interface, and secure connectivity. Since then, case studies of PWA implementations have shown optimistic promises to improve web page performance, time spent on websites, user engagement, and more. The report is to compare PWAs and RWAs and analyse some of the impacts of PWAs. The results show that many of PWA's features are not yet supported by some major browsers. Performance benchmarks have shown that the https connection required for the PWA slows down all PWA performance metrics on the first visit. With repeated access, some PWA features such as speed indexing are better than RWA. PWA storage consumption has more than doubled its RWA size. In conclusion, there may be a workaround even if some features are not directly supported by the browser. If https is not optimized on the web server, the PWA will be slower than a RWA. Different browsers have different storage limits for PWA caches.*

Keywords: Pattern Recognition, Security, Algorithms

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