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Status and trends of mobile-health applications for iOS devices: A developer's perspective

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Abstract

Modern smart mobile devices offer media-rich and context-aware features that are highly useful for electronic-health (e-health) applications. It is therefore not surprising that these devices have gained acceptance as target devices for e-health applications, turning them into m-health (mobile-health) apps. In particular, many e-health application developers have chosen Apple's iOS mobile devices such as iPad, iPhone, or iPod Touch as the target device to provide more convenient and richer user experience, as evidenced by the rapidly increasing number of m-health apps in Apple's App Store. In this paper, the top two hundred of such apps from the App Store were examined from a developer's perspective to provide a focused overview of the status and trends of iOS m-health apps and an analysis of related technology, architecture, and user interface design issues. The top 200 apps were classified into different groups according to their purposes, functions,

and user satisfaction. It was shown that although the biggest group of apps was medical information reference apps that were delivered from or related to medical articles, websites, or journals, mobile users disproportionately favored tracking tools. It was clear that m-health apps still had plenty of room to grow to take full advantage of unique mobile platform features and truly fulfill their potential. In particular, introduction of two- or three-dimensional visualization and context-awareness could further enhance m-health app's usability and utility. This paper aims to serve as a reference point and guide for developers and practitioners interested in using iOS as a platform for m-health applications, particular from the technical point of view.

Highlights

• The top 200 m-health apps in the Apple app store were examined. • A focused overview of the status and trends of iOS m-health apps was provided. • Unlike developers, mobile users favored tracking tools. • Visualization and context-awareness could further enhance m-health app's usability. • Five implications for iOS m-health developers were discussed



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Keywords

iOS; m-Health applications; Mobile development platforms

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