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THE ROLE OF ARTIFICIAL INTELLIGENCE IN OPTIMIZING UI/UX EXPERIENCE FOR MOBILE APPLICATIONS

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Abstract. *The article is devoted to the issue of artificial intelligence (AI), which plays a key role in optimizing the UI/UX experience for mobile applications, providing users with a more convenient, personalized and satisfied interaction with the application. Several ways in which AI affects UI/UX optimization are discussed.*

Keywords: *ARTIFICIAL INTELLIGENCE, UI/UX, MOBILE APPLICATIONS, EXPERIENCE.*

Artificial Intelligence (AI) is revolutionizing the way we live and work, and mobile app development is no exception. With the ability to analyze vast amounts of data and make decisions based on that data, AI is making mobile applications more intelligent, flexible and personalized for users. From chatbots to predictive maintenance and language translation, AI is enabling mobile apps to become more intuitive and user-friendly, and has great potential for mobile app development in the future.

Artificial intelligence can be used to analyze user behavior and predict their actions, helping mobile app developers make data-driven decisions about app features, design, and functionality. Voice recognition technology based on artificial intelligence can be used to implement voice commands and control in mobile applications, making them more accessible and convenient for the user. AI can be used to recognize and classify images and objects in mobile applications, enabling features such as augmented reality and object identification.

Artificial intelligence offers powerful capabilities for testing mobile applications. It can be used to automate many testing tasks. This increases the efficiency and accuracy of testing. AI can run automated tests repeatedly without human intervention. AI test scripts can easily run large test sets. They can thoroughly test the app's functionality on different devices and in different environments. With the help of AI, applications can be tested for performance under conditions of high loads and stress. AI can simulate real-world usage scenarios at scale. This allows you to identify bottlenecks even before the release. Visual AI allows you to automatically test apps for UI and UX issues. [1]

Artificial intelligence in a mobile app adds speed, scale and intelligence to mobile app testing processes. However, there are pros and cons of artificial intelligence in mobile application development. There are some data privacy issues and ethical considerations. Without completely replacing human testers, AI acts as a force multiplier. It allows you to release better applications faster. [1]

While artificial intelligence (AI) is used primarily to predict human actions based on data analysis and interpretation, user experience (UX) also aims to predict user behavior. So they have a connection, right? When both try to predict human behavior, they can work hand in hand in different contexts. That's why, in the context of mobile user experience, AND plays an important role. An earlier version of AI had algorithms that, based on user-defined data and rules for handling it, could make choices and work to reduce the burden of repetitive work.

These algorithms, which were quite precise and performance-oriented, used to operate according to pre-defined logic and were unable to adapt to any new contexts and new inputs. But as algorithms have become more intelligent and more capable of applying insights to extract information based on previous user data, true Artificial Intelligence (AI) has come to replace human involvement not only for work, but also for important decisions and expertise. results

Personalization of UH. While AI-based tools may not be as effective as building a full-fledged website to perfection without human intervention at the moment, at least the role of AI is becoming more prominent with user interface (UI) personalization. An AI-powered tool can take into account various data, ranging from the source of users, their demographics, user behavior, the duration and frequency of their sessions, the triggers they respond to, and more.

By analyzing all these factors, AI can quickly gain insight into users and their preferences. User experiences can now be designed, built, or customized based on these AI-validated insights. As such, AI is proving to be an invaluable technology for app developers and marketers as they try to meet the precise needs of customers. It takes a lot of user data to get insights. In addition to the so-called user-specific data that is generated when using the application, there are several other aspects of the data that help to understand the user with greater confidence and accuracy.

In this way, AI can generate relevant insights to provide users with an experience they can enjoy. AI can also help designers and app developers create space to meet the individual preferences of OS design [1, 2].

Personalization, obviously, leads to greater relevance of the application in the real conditions of users. Well, progress really inspires hope for such a reliable result without human intervention.

Artificial intelligence (AI) plays an important role in optimizing UI/UX experience for mobile applications, providing users with more convenient and personalized products. Here are some ways that AIs help in this process. Personalized recommendations: AI can analyze user data, such as their interactions with the appendix, and recommend the content, functions or products that most meet their interests and needs.

Analytics of custom behavior. AI can use machine learning algorithms to analyze the data on custom behavior and interact with the interface. On the basis of this analysis, patterns and trends can be identified to improve the user's experience.

Automatic Error Correction. AI can automatically detect and correct errors in the interface, such as incorrect fonts, overlapping elements, incorrect location of the buttons, etc., providing better interaction with the application.

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