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Adaptive user interface design based on the user demography

A Dissertation By

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Abstract

E-Commerce web applications are used by a wide range of user groups, but many modern websites are only targeted at a select few user groups, ignoring the other user groups. Given that the audience and demographics may be extremely diverse, the question is whether it is optimized to fulfill the needs of the user group when it comes to the e-commerce related area. In most circumstances, the website displays the same layout with the same font size, categories, and other qualities, which may not suit the demands of the user. Today, user-centered personalization is crucial, and the framework will make it simple to implement.

An framework's main purposes are to adapt based on user demographics. A few approachable demographic-based questions were posed to the user at the initial load to customize the layout, and the user was then offered a few profile suggestions. To find the relevant groupings, this proposal performed the clustering approach based on the previously accessible data. first figuring out how long each component should fixate and dwell, and then rearranging each component to prioritize accessibility. The ability of the framework to decide which elements need to be altered and which ones should not be what gives it its essential flexibility. This will resolve the layout break issue that a large portion of the current framework has. The framework's outcomes for font size, product category, and layout adaptation are also acceptable and fulfill user expectations. Additionally, the framework's SUS is at a good level, indicating that the majority of users won't have any trouble using it.

Keywords: E-Commerce, User behavior Analysis, HCI, Adaptive User Interfaces, K-Prototype