

Enhancing the user experience for mobile camera based anthropometric measurements, in online apparel shopping.

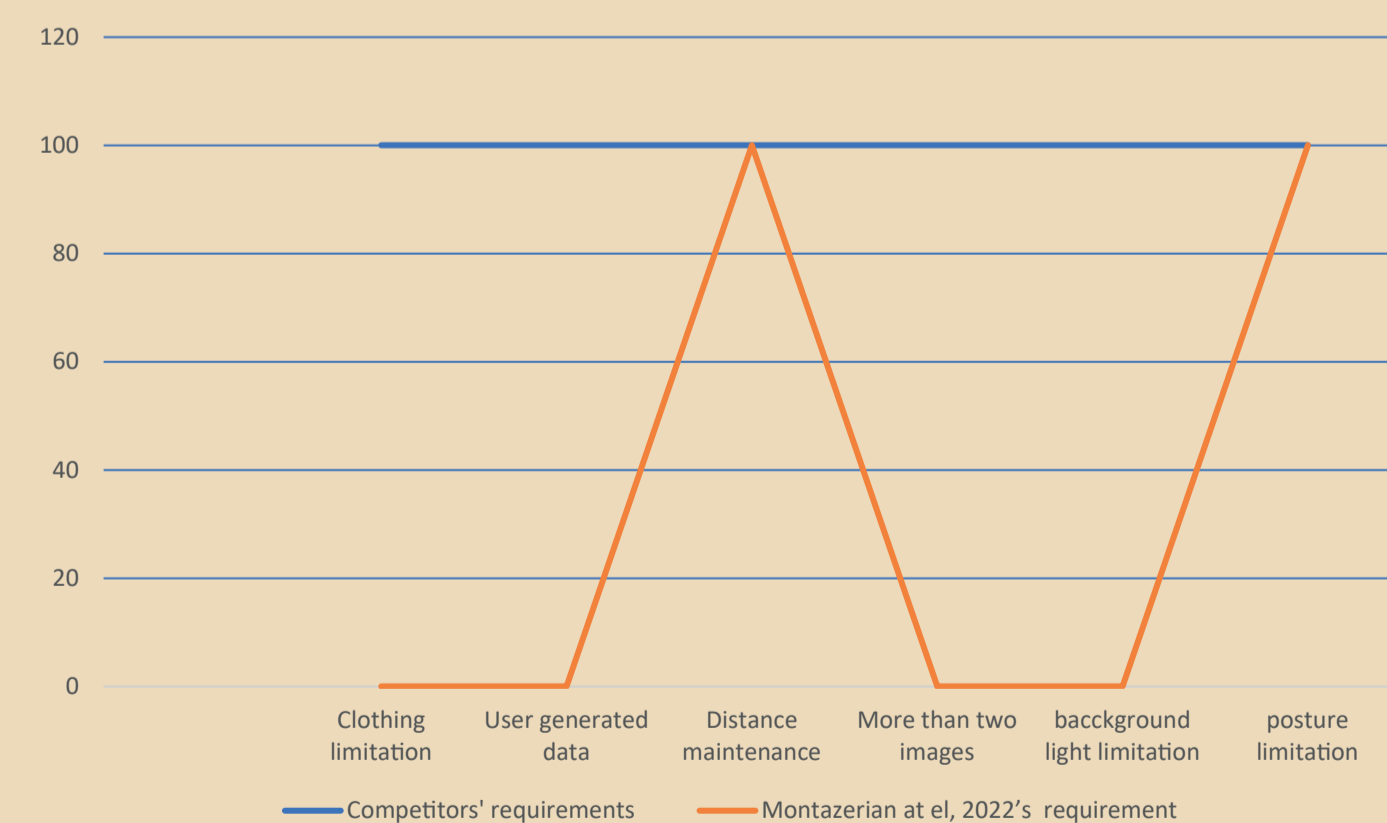
Mathuranthan Raveenthiran

Introduction



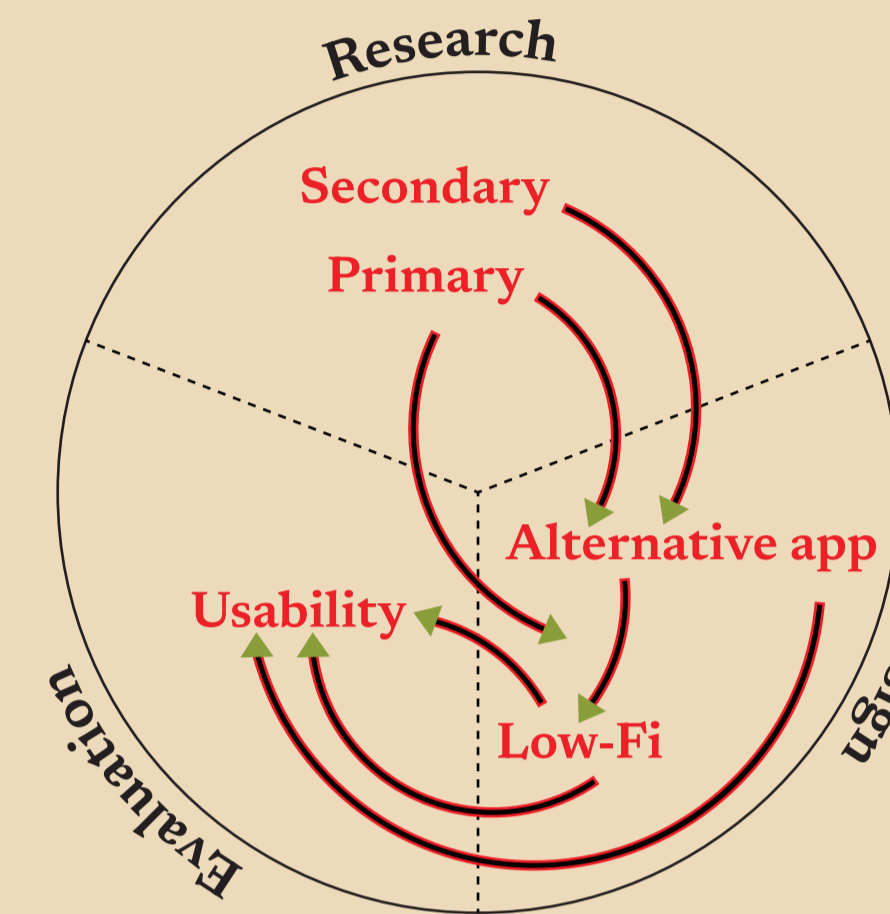
The project's objective is to enhance the user experience of mobile-based anthropometric measurements, particularly in the context of online clothing shopping. Changes in body measurements caused by both controllable and uncontrollable causes over the day, week, or even hour. A lack of knowledge impedes self-measurement. Affordability, accessibility, and societal constraints all limit the search for expert measurements. The growing demand for well-fitting clothing goes beyond events and sectors. To alleviate client dissatisfaction and remain competitive, fashion brands provide various size variations with slight variances. The variety of sizing standards makes it difficult to make a decision. An economical solution is mobile camera-based anthropometric measurement. The study examined Montazerian at el, 2022's technique and investigated strategies to improve user experience during measurements, with a special focus on the different accuracy requirements.

Competitors' limitations



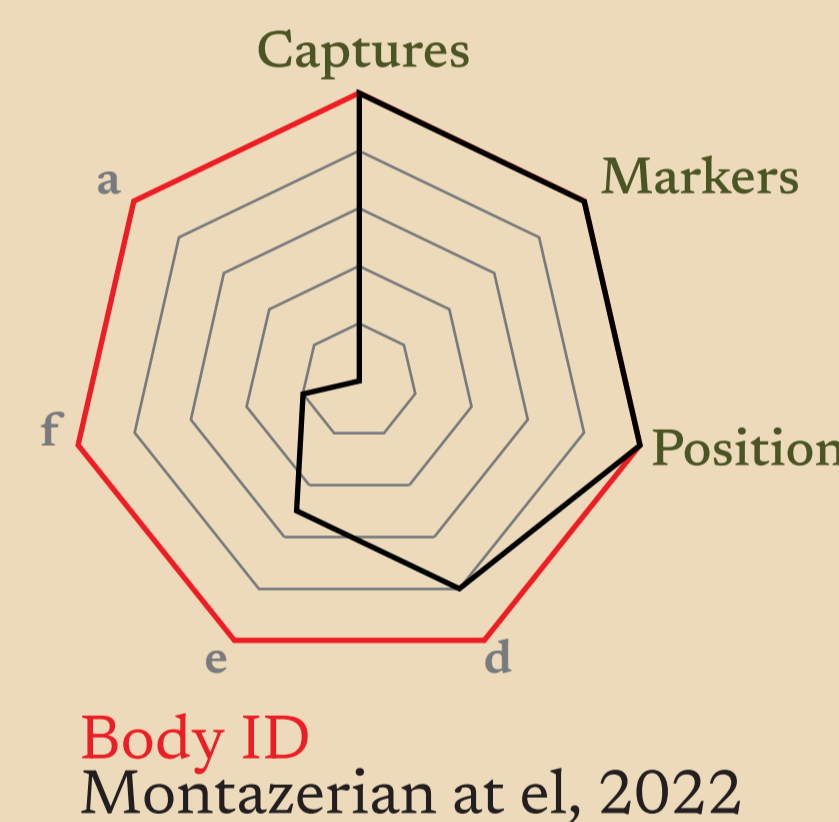
When compared to previous concepts, Montazerian at el, 2022's lightweight technique has significant advantages in the areas stated. Notably, users are not limited in terms of clothes, and the accuracy of results outperforms competitors.

Study methodology



The diagram illustrates how research findings and usability testing of the alternative app were employed to formulate a low-fidelity prototype. Subsequently, the prototype underwent usability testing for evaluation.

BACKGROUND STORY

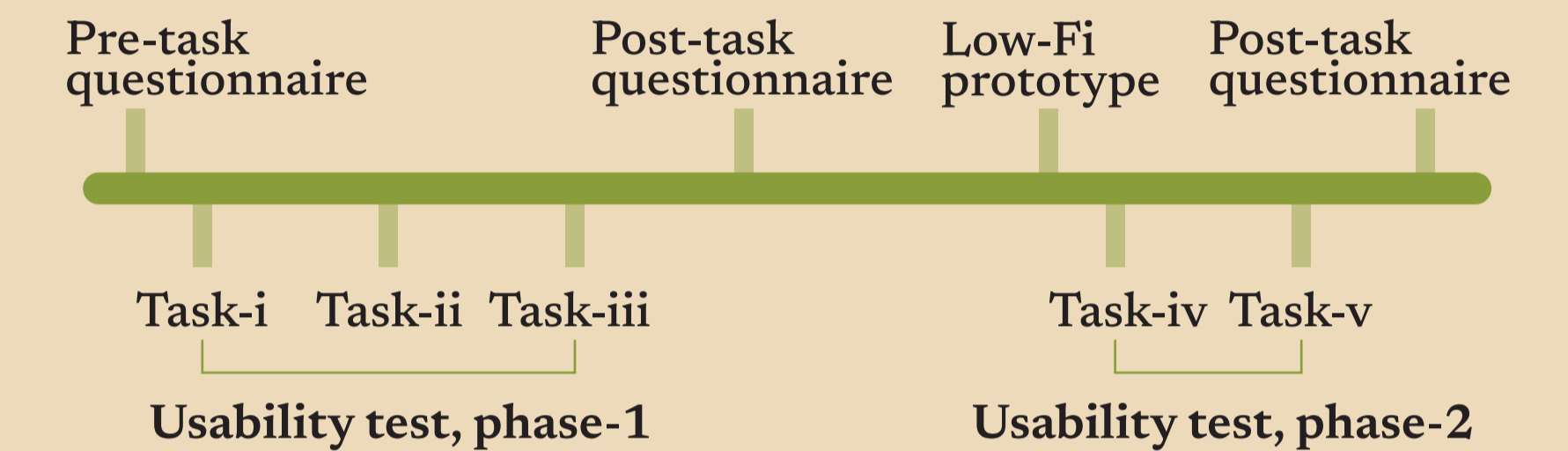


Alternative app

BodyID was selected as an alternative solution for usability testing. Two photos for measurement, semi-automated markers, and mobile positioning criteria were met.

Abstract: The purpose of this research is to improve mobile-based anthropometric assessments for online clothing purchases. The study tracked the user journey from start to finish, discovering pain areas using usability tests. Data was gathered through task-based tests and questionnaires, with the BodyID app functioning as the alternative testing platform for Montazerian in 2022. Based on the highlighted pain points, an updated low-fidelity prototype was created. User testing showed that the improved design enhances performance.

Testing & evaluation



The low-fi prototype was created using insights from phase-1 findings, while phase-2 aimed to assess the prototype's performance through usability testing.

Research result

- * Task repetition enhances performance and reduces errors.
- * Interactive in-display boundaries improve task efficiency by setting distance and posture.
- * Workspace, grid, and customizable marker points improve marker use.
- * Provide confirmation that adequate light conditions are needed.
- * The audio instruction's timing accuracy needs improvement, and an option to adjust the audio settings would be beneficial.

Conclusion & future scope

The study found user pain spots in capturing images and marking landmarks. The proposed design includes interactive in-display boundaries, altered audio cues, and level and lux sensors to address these issues. To solve marking issues, customisable features and interactive visual cues were included. Future directions for the research could include incorporating this size measurement approach into the e-commerce shopping experience, emphasising alerting features for several measurements throughout the day to accommodate body changes, and investigating visualisation using avatar-based displays.

