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NutriMom: Image Processing Based Mobile Application for Empowering Pregnant Mothers in Sri Lanka with Health and Convenience

KAD De Alwis[1#] and DU Vidanagama[1]

[1]Department of Information Technology, Faculty of Computing, General Sir John Kotelawala Defence University, Sri Lanka

[#]38-bit-0032@kdu.ac.lk

The rapid progression of internet-based communication technology has brought about a profound transformation in society, with implications for health care, particularly for expectant mothers. The smartphone application "NutriMom," which is based on image processing, is suggested in this study to empower expectant moms in Sri Lanka by improving their convenience and well-being. By letting users track their daily caloric intake and applying picture analysis to detect nutrients in their meals, the application aims to reduce nutritional issues. The app has features including an AI guide, grocery list generation, and a nearby grocery store locator in addition to providing individualized nutritional suggestions depending on the user's BMI. Using a mixed-method approach, the study combines data from interviews, surveys, and content analysis that is both quantitative and qualitative. With 74.7% of surveyed pregnant women not utilizing any such applications, preliminary findings indicate a significant demand for mobile applications in pregnancy care. The study emphasizes how mobile health solutions might enhance the health of expectant mothers and foetuses, especially in settings with limited resources like Sri Lanka. Moreover, the app's design considers localized dietary requirements and cultural customs, guaranteeing its applicability and acceptance by the intended user base. The user interface of the application has been developed to provide ease of use, especially for individuals with less expertise in technology. The NutriMom app makes use of developments in deep learning and computer vision to offer dietary assessments in real-time, guaranteeing pregnant moms receive the assistance and care they need for a safe pregnancy.

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