

## ABSTRACT

Health is an important aspect of human life, with obesity and low nutritional literacy being serious issues affecting individuals as well as society as a whole. Data shows a significant increase in obesity rates across various age groups in Indonesia, including children and reproductive women. In addition, low nutritional literacy results in a poor understanding of healthy eating patterns, exacerbating this condition. The main problem of this study is the limited time to consult a nutritionist, which hinders efforts to effectively address obesity.

To overcome these problems, this research offers a solution in the form of a Deep Learning-based diet consultation application called "Dietary". This application is designed to provide personalized diet recommendations according to user needs using Deep Learning technology. Through this application, users can access nutritional information and dietary recommendations at any time without having to meet directly with a nutritionist, thus overcoming time constraints and increasing people's nutritional literacy.

The results showed that the use of the "Dietary" app significantly improved users nutritional awareness and knowledge, and assisted them in losing weight. Test results showed that the app was effective in detecting foods, providing nutritional information, and providing accurate dietary recommendations and users reported an average increase in satisfaction above 87%. The app was pilot tested by a nutritionist who provided favorable feedback on the app. The nutritionist validated all aspects of the calculations and formulas used by the app to ensure suitability in the use of nutritional calculations. Based on the evaluation results, the application passed the use of formulas and calculations and was assessed as an application that can assist users in dieting both non-obese users and people with obesity. In conclusion, the "Dietary" app can be an effective tool in addressing obesity and nutritional literacy issues, with the potential to improve overall public health.

Keywords: obesity, nutritional literacy, deep learning, diet consultation, health application