

## **ABSTRACT**

The lack of knowledge and access to nutritional information poses a major challenge in maintaining public health and raising awareness about the importance of consuming balanced and nutritious food. This issue is particularly prevalent among individuals who are already concerned about nutrition but find it difficult to seek information from the internet. They perceive this method as inefficient, leading to a reluctance to seek out nutritional information.

An innovative solution is needed that leverages the latest technology is required to address this problem. Therefore, "AyoSehat" application is designed with a mobile-based development model, implementing deep learning object detection technology and Large Language Model (LLM). The application's backend utilizes cloud BaaS (Backend as a Service) such as firebase and Google Cloud Platform (GCP) to provide authentication, storage, and real-time databases. The purpose of developing this application is to centralize all nutritional information, making it easy and practical for users to search for and access the nutritional information they need.

Based on testing results, this application has demonstrated a high acceptance rate among users, with an average percentage index of 88%. The application is considered useful in helping users obtain nutritional and calorie information, as well as supporting the achievement of healthy eating. Although there are still some aspects that need improvement, overall, this application has proven to be beneficial and can serve as a tool to support user's health and nutritional awareness.

Keywords: nutritional information, technology, mobile, deep learning, large language model, calories, nutrition