

Daily food nutrition adjustment program

Research Motivation

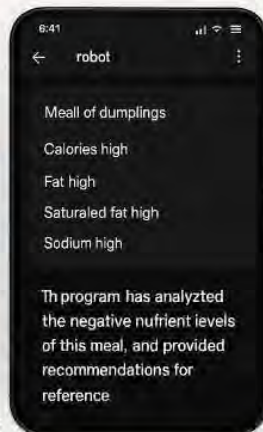
With the change of modern lifestyle, unhealthy eating habits have become one of the main reasons for the increase of chronic diseases (such as cardiovascular disease, obesity and diabetes). Studies have shown that balanced nutrient intake (such as Omega-3 fatty acids, vitamin C, antioxidants and dietary fiber) has significant benefits for cardiovascular health, immunity and digestive system function. However, many people lack scientific dietary guidance and find it difficult to develop a daily nutrition plan according to their personal needs, resulting in unbalanced nutrition or increased health problems. In addition, existing diet management tools are still insufficient in terms of personalization, ease of use or scientific basis. Therefore, this study aims to develop a "daily food nutrition adjustment program" that integrates nutritional knowledge and practical tools to help users choose appropriate foods according to their personal health needs, achieve a balanced diet, and thus improve overall health and prevent chronic diseases.



This is the code of the food assessment app.



Meal of dumplings



The program has analyzed the negative nutrient levels of this meal, and provided recommendations for reference

TECHNICAL ARCHITECTURE

1

Introduction to Hardware Components

Purpose: analyze useful information in food images: Components; use a camera as the vision sensor, connect it to the development board/edge device

2

Software System Architecture

Purpose: determine nutrient levels of meals and output results. Architecture: use a deep learning model trained on an image dataset for analysis

3

Data Collection and Analysis Method

Method: APP collects images and analyzes the nutrient data using a deep learning model, providing insight into eating habits

