**Foodsmart: an intelligent food recognition and nutritional analysis system**

SE-E-7

Aviv Hagag; avivha3@ac.sce.ac.il   
Daniel Arvili; daniear4@ac.sce.ac.il

Advisor: Dr. Marina Litvak

SCE - Shamoon College of Engineering, Be'er-Sheva

Maintaining balanced nutrition is challenging due to the complexity of modern dietary choices. The FoodSmart application addresses this by utilizing advanced computer vision techniques, specifically the YOLO model, to enable accurate identification of food items from user-uploaded images. It provides instant nutritional insights, including calorie count and ingredient analysis, allowing users to track their dietary balance effectively. Unlike other apps that offer generic recommendations, FoodSmart further personalizes the user experience through tailored nutritional advice and healthy lifestyle tips generated via integration with an LLM. Designed with an intuitive and accessible interface, FoodSmart aims to promote healthier eating habits, enhance nutritional awareness, and support sustained improvements in users’ overall health.

Keywords: calorie count, computer vision, dietary balance, nutritional advice, yolo.