A Deep Convolutional Neural Network for Food Detection and Recognition

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Abstract

Overview of the project

•In this project,we propose a new deep convolutional neural network (CNN) configuration to detect and recognize local food images.

•Various types of food with different color and texture reflect the fact that the food image recognition is considered a challenging task. However, deep learning has been widely used as an efficient image recognition method, and CNN is the contemporary approach for deep learning to be implemented.

•CNN has been optimized to the tasks of food detection and recognition with few modifications.

Abstract

Overview of the project

•For evaluation of recognition performance, CNN achieved significantly higher accuracy than traditional approaches with manually extracted features.

•Additionally,it was found out that convolution masks show that the features of food color dominate the features map.

•For the process of food detection, CNN also exhibited considerably higher accuracy than other conventional methods.

Objectives

What we want to achieve

1.To develop a model to classify and recognize different food items using Machine Learning and Deep Learning.

2.To analyze the different food items and predict recognize the output effectively.

3.To determine the nutritional value of the food item from its image.

Benefits to Society

- Food classification system can help social media platform to identify food.
- Food classification system can enable an opportunity for social media platform to offer advertisement service for restaurants and beverage companies to their targeted users.
- Food classification can be used in diet & supplementary applications and websites for the assessment of nutritional information of the food.
- Food recognition and classification is an important task to help human beings record the daily diets.
- Images of food are one of the most important information to reflect the characteristics of food.

Thank You