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(57) Abstract :
Nowadays, a smart phone has become an integral component of daily life, revolutionizing the way we interact and carry out our daily activities. Food identification systems that measure the calorie and nutrient composition of foods while also presenting the item's recipe are proposed. Rather than transferring the image to a server for processing, which may be inefficient due to network issues, the recognition and processing of the image is done on a smartphone application. In and of itself, food recognition based on a single photograph is a difficult task. Traditional image analysis processing algorithms had low classification accuracy in the past, however deep learning techniques allowed for food item image recognition. To detect food items, a user must first draw bounding boxes on the screen by touching it, after which the application system will begin to recognize food items within those bounding boxes. Machine learning-based CNN-Convolutional Neural Network technique is utilized to recognize the user-input food item image to increase recognition efficiency. When the processing is finished, the application displays the accurate data on the screen. This effort began with the admirable purpose of supporting persons who have health dietary concerns as well as those who are health conscious. This platform will act as a one-stop shop for a user's various information needs. As a result, a user can easily access a range of essential statistics using only one application. Furthermore, the system is designed to obtain the direction of food regions with a higher CNN and SVM (Support Vector System) output score, display it on the screen as an arrow, and ask the user to move a smart phone camera. This recognition process happens about once every second.

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