

Food Recognition for Smart Restaurants and Self-service cafes

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In recent years, deep learning has been applied to different tasks in food recognition field. Number of interesting solutions have been proposed. Due to the complexity of background's food, the problem of pattern recognition on a limited data set is still a challenging problem. Experiments were conducted with a self-collected set of data on trays in the canteen, containing images of various dishes depending on the day of the week. The main objective of this work is to compare the effectiveness of modern object detection architectures, namely YOLO_v5, YOLO_v6, YOLO_v7 and YOLO_v5, with a custom classifier of the second stage in the conditions of the task. Experimental results show that the proposed architecture can effectively distinguish dishes with high performance.

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