

CaloriScan – Simple and Clear: Calorie Scanning From Images

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Abstract: This review paper examines the development and application of AI-based systems for automated food calorie and nutrition estimation from images. With rising global health concerns related to diet-related diseases, accurate dietary tracking has become essential for health management. Traditional manual food logging methods are time-consuming and prone to errors, creating a need for automated solutions. This paper synthesizes current research on computer vision and deep learning techniques applied to food recognition, portion size estimation, and nutritional analysis. The review discusses various methodological approaches, technological architectures, performance metrics, practical applications, and existing challenges in this rapidly evolving field. The paper concludes by examining future directions and the potential impact of these systems on public health and personalized nutrition.

Keywords: AI, Deep Learning, Food Recognition, Calorie Estimation, Computer Vision, Nutrition Analysis, CNN, Image Processing, Dietary Assessment

