

# **Application of deep learning models for image-based food classification to support nutritional monitoring**

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**Abstract:** This topic focuses on applying deep learning techniques to build an automatic food classification system from images. The research process begins with analyzing market needs for effective dietary management, then identifies the main objective of developing a model that accurately and quickly predicts dishes based on image data. Deep learning methods are chosen for their flexibility and ability to learn from complex data patterns. The expected outcomes of this research not only help improve the performance of nutritional monitoring but also contribute to the development of image recognition technology in the medical and healthcare fields.

**Keywords:** Deep learning, Image classification, Nutritional regimen, Recognition technology, Dietary management