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Vitamin Deficiency Detection Using Image Processing and Neural Network

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Abstract: *Vitamin deficiencies are a major public health concern, particularly in developing countries, where lack of timely diagnosis can lead to severe health complications. Conventional diagnostic methods such as blood tests are invasive, time-consuming, and expensive. This paper presents a non- invasive and cost-effective approach for detecting vitamin deficiencies using image processing and neural network techniques. The system analyzes images of visible human features such as skin, nails, tongue, and eyes to identify patterns associated with specific vitamin deficiencies. Image preprocessing, feature extraction, and classification are performed using an Artificial Neural Network (ANN). Experimental results demonstrate that the proposed method achieves satisfactory accuracy and can serve as an effective early screening tool for vitamin deficiency detection.*

Keywords: Vitamin Deficiency, Image Processing, Neural Network, ANN, Health Diagnosis

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