

Morphological Image Processing using improved Canny Algorithm: Curing Inflammatory Skin infection

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Abstract

Abstract- Trichophyton rubrum infections do not elicit strong inflammatory responses, as this agent suppresses cellular immune responses involving lymphocytes particularly T-cells. It is an exclusively clonal, anthropophilic saprotroph that colonizes the upper layers of skin, and is the most common cause of athlete`s foot, fungal infection of nail, jock itch, and ringworm. This study aims to detect the Trichophyton rubrum fungus on upper layer of skin. This paper describes the model that is based on improved adaptive Canny edge detection algorithm which aims to solve the threshold of the traditional Canny cannot be adjusted automatically and the morphological filter replaces the Gauss filter to smooth the image, and the OTSU algorithm is utilized to adjust the high and low thresholds dynamically. The experimental results show that the improved Canny algorithm, which can not only improve the contrast of the image and automatically adjust the threshold but also reduce the background and false edges, is an effective edge detection method. We tested the results to calculate the effectiveness of the techniques used for detecting fungus for medicating it hastily to cure its inflammatory action and to control its further spreading.

Key- Words / Index Term

Edge detection, preserving and smoothing/filtering, OTSU algorithm, Canny algorithm, Improved Canny algorithm, Trichophyton, fungi, inflammation, treatment.

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