عنوان مقاله:

Retinal Vessel Extraction Using Dynamic Threshold and Enhancement image Filter From Retina Fundus

نویسندگان:

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خلاصه مقاله:

Retinal blood vessels in every human being are important elements of various shapes and sizes, and retinal blood vessels can also determine various types of diseases. Therefore, retinal blood vessel extraction from the retinal fundus image is a key step in the process of recognizing the shape and size of disease patterns in the retina so that it can determine diseases of different types, but the feasibility of retinal blood vessel patterns is important for subsequent processes such as detection, identification, and classification. The previous method that focused on retinal vessel extraction has its own characteristics, especially in the pre-processing, extraction, and post-processing stages. However, there were still many characteristics in previous studies that made it insufficient to meet the needs of ophthalmologists, especially in the segmentation stage, many retinal vessels disappeared at the ends and became thicker, even assuming noise became a retinal blood vessel. Therefore, we conducted an experiment to develop retinal blood vessel segmentation in the medical world using Retina Fundus Dynamic Threshold and Image Enhancement Filter. By using the latest approach in the preprocess namely Butterworth Bandpass Filter as Enhancement Image Filter and the latest segmentation using Dynamic Threshold with a small time value for implementation with low device specification. In this paper we use the databases of DRIVE and STARE. So the proposed method for achieving the average measurement parameters from the DRIVE database is 94.77 percent accuracy and the STARE database is 87.68 percent accuracy.

کلمات کلیدی:

Butterworth Bandpass Filter; Dynamic Threshold; DRIVE; Retinal Blood Vessels; Segmentation; STARE

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