

GRAPH-CUT METHOD FOR SEGMENTATION OF RETINAL VASCULAR NETWORK

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ABSTRACT

Optical diagnosis could be efficient and reliable by the exact analysis of retinal structures. The paper presents an automated method for the segmentation of retinal blood vessels in retinal images. Algorithm begins with the enhancement of vessels by morphological operations, followed by extraction of retinal vascular network by the graph cut method. The proposed method could be used to assist the computer aided diagnosis in modern ophthalmology since the study of vascular network is of major interest while in diagnosis of retinal dsiseases like diabetic retinopathy, glaucoma and haemorrhages. The performance of suggested method in terms of accuracy, sensitivity, specificity and precision are tested and analysed on a publicly available DRIVE database.

KEYWORDS: DRIVE Database, Graph-Cut Method, Retinal Structure, Vessel Segmentation