{tag}

Computer Vision 2013 IJCA Journal

ISCV

Year of Publication: 2014

Authors:

S. Letishia Mary

{bibtex}iscv1308.bib{/bibtex}

Abstract

The optic disk (OD) center and margin are typically requisite landmarks in establishing a frame of reference for classifying retinal and optic nerve pathology. Reliable and efficient OD localization and segmentation are important tasks in automatic eye disease screening. OD Cup is segmented using Gradient method, Adaptive Threshold and Connected Component. They utilize BBB method hang on the Tint Discrepancy in the retinal images for fast and fully automatic OD localization and segmentation. Its robustness make the OD and OD Cup segmentation useful for automatic retinal disease screening in a variety of clinical settings and eye diseases such as diabetic retinopathy(DR), Glaucoma, other common retinal diseases such as age related macular degeneration including myopic crescents, per papillary atrophy (PPA), and myelinated nerve fibers.

{/tag} IJCA Proceedings on In<u>tern</u>ational Seminar on © 2014 by

ences

- Mahfouz. A. E and Fahmy. A. S, "Ultrafast localization of the optic disc using dimensionality reduction of the search space", Int. Conf. Med. Image Computing Computer-Assisted Intervent., vol. 5762, pp. 985–992, 2009.

- M. Niemeijer, M. D. Abramoff and B. Van Ginneken, "Segmentation of the optic disc, macula and vascular arch in fundus photographs", IEEE Trans. Med. Imag., vol. 26,no. 1,pp. 116–127,January 2007.

- E. Grisan, and A. Ruggeri, M. Foracchia, "Detection of Optic Disc in Retinal Images by Means of a Geometrical Model of Vessel Structure",IEEE Trans. Med. Imag., vol. 23, no. 10. 2004

- A. Hoover and M. Goldbaum, "Locating the optic nerve in a retinal image using the fuzzy convergence of the blood vessels", IEEE Trans. Med. Imag., vol. 22, no. 8, pp. 951–958,Aug. 2003.

- Gopal Datt Joshi, Jayanthi Sivaswamy, and S. R Krishnadas, "Optic Disk and Cup Segmentation From Monocular Color Retinal Images for Glaucoma Assessment", IEEE transactions on medical imaging, vol. 30, no. 6,June 2011.

- Keith A. Goatman, Alan D. Fleming, Sam Philip, Graeme J. Williams, John A. Olson, and Peter F. Sharp, "Detection of New Vessels on the Optic Disc Using Retinal Photographs", IEEE transactions on medical imaging, vol. 30, no. 4,April 2011.

- M. Lalonde, M. Beaulieu, and L. Gagnon, "Fast and robust optic disk detection using pyramidal decomposition and Hausdorff-based template matching", IEEE Trans. Med. Imag., vol. 20, no. 11, pp. 1193–1200,Nov. 2001.

- A. Youssif, A. Ghalwash, and A. Ghoneim, "Optic disc detection from normalized digital fundus images by means of a vessels' direction matched filter", IEEE Trans. Med. Imag., vol. 27, no. 1, pp. 11–18, Jan. 2008.

Computer Science

Index Terms

Applied Sciences

Keywords

Optic Disk Optic Nerve Pathology Diabetic Retinopathy Per Papillary Atrophy.