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# A Discussion on the Variety of Techniques used in the Processing of Digital Images

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**Abstract:** Digital image processing, or DIP, is the process of using various computer techniques to process digital photos. Digital image processing has been employed in many industries, such as pattern identification, remote sensing, picture sharpening, color and video processing, and medicine. This research provides an overview and review of the literature on digital image processing techniques, such as edge recognition, segmentation, compression, and picture pre-processing.

**Keywords:** Digital Image Processing, Image Compression, Image Filtering, Edge Detection.

### REFERENCES

- [1]. Eapen, M., and Korah, R., "Medical image segmentation for Anatomical Knowledge Extraction", Journal of Computer Science, vol 10, 2014.
- [2]. Sivappriya, T., and Muthukumaran, K., "Cancer Cell Detection using Mathematical Morphology", International Journal of Innovative Research in Computer and Communication Engineering, vol 2, (mar) 2014.
- [3]. Puri, C., and Sukhwinder Singh., "Image segmentation and Classification- A Review", International Journal of Innovative Research in Science, Engineering and Technology, vol 3, (apr) 2014.
- [4]. Afifi N.S., Taujuddin., and Lockman, N.A.B., "Image Compression using Wavelet Algorithm",
- [5]. International Seminar on the Application of Science & Mathematics 2011.
- [6]. Raju, K.M.S., and Karthikeyani, V., "Improved Satellite Image Pre-processing and Segmentation using Wavelets and Enhanced Watershed Algorithms" International Journal of Scientific & Engineering Research, vol 3, 2012.
- [7]. Sukanya, Y., and Preethi, J., "Analysis of image compression algorithms using wavelet transform with GUI in MATLAB", International Journal of Research in Engineering and Technology, eISSN: 2319-1163, pISSN: 2321-7308, vol 2, pp: 595-603, 2013.
- [8]. Saif, J.A.M., Al-Kubati, A.A.M., Hazaa, A.S., and Al-Moraish, M., "Image Segmentation using Edge Detection and Thresholding", International Arab Conference on Information Technology, ISSN: 1812-0857, pp: 473-476, 2013.
- [9]. Salman, N.,"Image Segmentation Based on Watershed and Edge Detection Techniques", 2006.
- [10]. Karantzalos, K., and Argialas, D., "Improving edge detection and watershed segmentation with anisotropic diffusion and morphological levelings" International Journal of Remote Sensing vol 27, pp:5427-5434, 2006.
- [11]. Alamri, S.S., Kalyankar, N.V., and Khamitkar, S.D., "Image Segmentation By Using Edge Detection", International Journal on Computer Science and Engineering, vol 02, pp:804-807, ISSN:0975-3397,2010.
- [12]. Shahzad, A., Sharif, M., Raza, M., and Hussain, K., "Enhanced Watershed Image Processing Segmentation", Journal of Information & Communication Technology, vol 2, pp. 01-09,2008.
- [13]. Ramadevi, Y., Sridevi, T., Pootnima, B., and Kalyani, B., "Segmentation and Object Recognition using Edge Detection Techniques", International Journal of Computer Science &Information Technology, vol 2, pp: 153-161, 2010.

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- [14]. Nagabhushana Rao, M., Venkateswara Rao, M., and Bhagavi, Y, K., "Applications of Edge Based Segmentation inBio-Metric Security System", International Journal of Advanced Engineering &Application, pp:175-178, (jan) 2011.
- [15]. Wayalun, P., Laopracha, N., Songrum, P., and Wanchanthuek, P., "Quality Evaluation for Edge Detection of Choromosome G-band Images for Segmentation", Applied Medical Informatics, vol 32, pp. 25-32, 2013.
- [16]. Acharjya, P.P., and Ghoshal, D., "An Approach to reduce Over Segmentation in Watershed Ridge Line Observation", International Journal of Advancements in Research & Technology, vol 2, 2013.
- [17]. Vijayran, S., and Paramjeet singh., "A Watershed Based Morphological Operator Approach for Image Segmentation", International Journal of Advanced Research in Computer and Communication Enginnering, vol 2, 2013.
- [18]. Acharjya, P.P., Santra, S., and Ghoshal, D., "An improved scheme on morphological image segmentation using the gradients", International Journal of Advanced Computer Science and Applications, vol 4, pp: 100-104, 2013.
- [19]. Tulsani, H., Saxena, S., and Yadav, N., "Segmentation using Morphological Watershed Transform for counting Blood Cells", International Journal of Computer Applications & Information Technology, vol 2, pp: 28-36, 2013.
- [20]. Acharjya P.P., and Ghoshal, D.,"An Effective Human Fingerprint Segmentation Method using Watershed Algorithm", International Journal of Computer Applications, vol 53, 2012.
- [21]. Acharjya, P.P., Sinha, A., Sarkar, S., Dey, S., and Ghosh, S., "A new Approach of watershed algorithm using distance transform applied to image segmentation", International Journal of Innovative Research in Computer and Communication Engineering, vol 1, 2013.
- [22]. Siddiqui, F.K., and Richhariya, V., "An efficient image segmentation approach through enhanced watershed algorithm", International Conference on Recent Trends in Applied Science with Engineering Applications, vol 4, 2013.
- [23]. Thenmozhi, N., Mahesh, K., and Kuppusamy, K., "Fast Watershed Transform" International Journal of Engineering Research and Applications, ISSN: 2248-9622, pp. 3118-3122, 2012.
- [24]. Dey, N., Sinha, A., and Rakshit, P., "Robust Watershed Segmentation of Noisy Image using Wavelet", International Journal of Computer Science & Communication Networks, vol 1, pp: 117-122, 2011.
- [25]. Belaid, L.J., and Mourou, W., "Image Segmentation: A Watershed Transformation Algorithm", Image Anal Stereol, pp: 93-102, 2009.
- [26]. Kumar, P.E., and Sumithra, M.G., "Medical image Compression using integer multi wavelets transform for telemedicine applications", International journal of Engineering and Computer Science, vol 2, ISSN: 2319-7242, pp: 1663-1669, 2013.

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