

Hard clustering method in image segmentation

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Abstract: In practice, image processing and analysis face many challenges in terms of performance and accuracy. This topic focuses on the Hard Clustering method to improve the image segmentation process. The goal of the research is to build an image segmentation system based on machine learning methods, aiming to meet practical requirements in security surveillance and healthcare. The research methodology includes both theory and experimentation, combining Deep Learning with traditional algorithms to produce the most accurate clustering results. The expected outcome is a significant contribution to the field of image processing, enhancing service quality in application industries.

Keywords: Image segmentation, Hard clustering method, Machine learning, Image processing, Security surveillance