A Survey on Two Dimensional Cellular Automata and Its Application in Image Processing

Abstract

Parallel algorithms for solving any image processing task is a highly demanded approach in the modern world. Cellular Automata (CA) are the most common and simple models of parallel computation. So, CA has been successfully used in the domain of image processing for the last couple of years. This paper provides a survey of available literatures of some methodologies employed by different researchers to utilize the cellular automata for solving some important problems of image processing. The survey includes some important image processing tasks.
such as rotation, zooming, translation, segmentation, edge detection, compression and noise reduction of images. Finally, the experimental results of some methodologies are presented.

References

A Survey on Two Dimensional Cellular Automata and Its Application in Image Processing


**Index Terms**

Computer Science  
Image Processing

**Keywords**

Cellular Automata  
Linear Rule  
Edge Detection  
Noise Reduction  
Zooming  
Rotation  
Translation