A COMPARATIVE STUDY IN TEXTURE RECOGNITION METHODS

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Abstract

The objective of this study is comparing numerous methods in texture recognition in objects. Textures are a ubiquitous visual experience and describe a wide variety of surface characteristics such as terrain, plants, minerals, fur and skin. Texture models characterize local spatial information in an image. Since reproducing the visual realism of the real world is a major goal for computer graphics, textures are commonly employed when rendering synthetic images for reconstruction of 3D model from objects also texture analysis is an important generic research area of machine vision. The areas of application include industrial surface inspection, biomedical image analysis, analysis of aerial or satellite images, document analysis, content-based image retrieval, and model-based image coding and for recognition especially in natural scenes texture is a useful method. Texture is the nature of a surface may be regular, course or fine and observed image texture depends on factors such as scene geometry and illumination conditions that make a noise in texture recognition, this a problem that must be solved. So we analysis some methods like gray-level co-occurrence, energy and texture, surface and texture, edge and texture, fractal dimension e.g. in simulated and real images with describing the advantages and disadvantages of each method. Finally we determine nature of each surface about that is regular, course or fine and how much is near to real world by programming each method in Matlab6.5. Then this research represents the capability of various methods for texture recognition in objects.