عنوان مقاله:

Medical Waste Segregation using a Fuzzy Expert System

محل انتشار:

اولین کنفرانس سیستم‌ها و فناوری‌های محاسباتی مراقبت از سلامت (سال: 1398)

تعداد صفحات اصل مقاله: 7

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خلاصه مقاله:

This paper introduces an automated waste segregation instrument commercially productive for laboratory applications and for medical waste recognition. In this system, a fuzzy rule based system is designed being able to segregate 24 different hospitals waste types which are selected from 8 more common medical waste groups. After capturing each frame, some preprocessing operations are done, features are extracted, fuzzy parameters, fuzzy terms and fuzzy rules are determined and finally a rule with a maximum certification degree is fired. The system is flexible on different light conditions, view degrees of the camera, and 360 degree object rotation. Our experiments on a real environment and using both new and used wastes show that the performance of the system is more than 94%. It works on different light conditions, different view degree of camera and different positions of the objects.

کلمات کلیدی:

component; medical waste segregation; fuzzy expert system; fuzzy rule-based system

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