

عنوان مقاله:

accurate fire detection system for various environments using gaussian mixture model and HSV space

محل انتشار:

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خلاصه مقاله:

Smart and timely detection of fire can be very useful in coping with this phenomenon and its inhibition. Enhancing some image analysis methods such as converting RGB image to HSV image, smart selecting the threshold in fire separation, Gaussian mixture model, forming polygon the enclosed area resulted from edge detection and its combination with original image, this papers addresses fire detection. Accuracy and precision in performance and rapid detection of fire are among the features that distinguish this proposed system from similar fire detection systems such as Markov model, GM, DBFIR and other algorithms introduced in valid articles. The average accuracy (95%) resulted from testing 35000 frames in different fire environments and the high sensitivity (96%) was quite significant. This system be regarded as a reliable suitable alternative for the sensory set used in residential areas, but also the high speed image processing and accurate detection of fire in wide areas makes it low cost, reliable and appropriate

کلمات کلیدی:

Fire Detection, Gaussian Mixture Model, Image Processing, HSV Space, Edge Detection

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