

عنوان مقاله:

Extracting the Best Features from an Image using Genetic Programming

محل انتشار:

پنجمین کنفرانس بین المللی تحقیقات نوین پژوهشی در مهندسی و تکنولوژی (سال: ۱۳۹۶)

تعداد صفحات اصل مقاله: ۹

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خلاصه مقاله:

In this paper, we used genetic programming (GP) for feature extraction and tested the resulting program using Brodatz and Vistex images as datasets. Our inputs were the most basic level of information in the image, raw pixels. Our goal was to reach the smallest image size with the greatest number of features in order to improve classification accuracy and also time of execution and processing. To achieve this goal, we used a loop in the program to extract the image features and determine classification accuracy for different images sizes. After feature extraction, we used nearest neighbor algorithm for classification. Average of classification accuracy in our method was ۸۶.۶۴% for Brodatz images and ۸۵.۶۸% for Vistex images. We showed that our method, texture feature extraction using genetic programming, can compete with other methods

کلمات کلیدی:

Texture, Feature Extraction, Genetic Programming, Nearest Neighbor Classification, Raw Pixel, Brodatz, Vistex

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