

## Biometrics Detection and Recognition Based–on Geometrical Features

### Extraction

الكشف عن القياسات الحيوية والتعرف عليها على أساس استخراج الميزات الهندسية

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Distance Transformation (EDT).

Abstract:

Recently, the biometric detection and recognition have been more interest by people with the progress of technology nowadays. The human fingerprint is an ideal source of data for negative person identification.

Fingerprint structure over time does not change, this feature is a good visible candidate solution. The fingerprint can be considered as distinctiveness, collectability, universality, and permanence satisfies biometric characteristic. A new method for fingerprint detection and recognition based geometrical features extraction such as curvature of lines has been presented. The process in this paper passes through preprocessing phase by using same images size. Active contour model (ACM) of Euclidean distance transformation used to detect the fingerprint edges. The median filter was applied in order to image enhancement and denoising after converting the image into the binary system. After then, Sobel edge detection makes some enhancement on the images and extract the features of images. Finally, classified the feature extracted by using absolute error distance and nearest neighbor. This method proved by results that the proposed algorithm shows the accuracy and efficiency almost 97%.