Abstract

The objective of this paper is to extract some distinct shape features of an image with combination of morphological operation and Gabor filtering. The main application of shape feature is to recognize a geometric shape, for example detection of fonts of a language but here we consider fingerprint as test case. Although core and minutia points (bifurcation and termination of ribs) are the distinct feature of a fingerprint but we emphasis on the shape feature of the image as the preliminary identification. The technique used here can be combined with minutia based identification technique to enhance confidence level. Among fifty widely used shape features, only nine spatial and central moments of different order are considered here. We consider two connected components of a binary fingerprint, which provides the maximum number of non-zero elements. Like conventional geometric shape, our analysis reveals similarity or dissimilarity of a test fingerprint with the stored samples of database.

References

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Index Terms

Computer Science

Security

Keywords
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