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Authors:

Madhavi Chhugani

Buchade P. B.

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## Abstract

Computerized security systems are gaining significant importance from identification and authentication point of view in various areas like entrance control in buildings; access control for computers in general or in the prominent field of criminal investigation. This has resulted in an increased interest in biometric systems which enables automatic, i. e. quick with little or no human intervention, identification and authentication of an individual by physical characteristics. Illumination variation is a known problem in such systems affecting the error rate of the entire system. A GUI (Graphical User Interface) system for face detection and recognition based on Principal Components is designed and the effect of varying surrounding illumination is studied in this paper. The person to be recognized is subjected to different light levels, measured using a

standard Light Lux Meter.

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## Index Terms

Computer Science

Image Processing

## Keywords

Gui (graphical User Interface) Roi (region Of Interest) Principal Component Analysis

Eigen Vectors.