

Bahria University Discovering Knowledge

### FINAL YEAR PROJECT REPORT

# FACE EXPRESSION ANALYZER BY USING EIGEN VECTORS AND VALUES

By

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#### ABSTRACT

Face expressions are playing a vital role in public interaction and communication, it is widely used in behavioral examination of reactions. The use of facial expression recognition systems are in the field of games, intelligent robotics, behavioral sciences, health sector etc. As far intelligent agents are considered current study can be a fruitful for any Intelligent Agent working as councilor or observer for depression patients, elderly people, children learning or drug rehabilitation centers; where mood is an important factor to be considered while talking to a human as a computer based intelligent avatar. This current study is working for facial expression analyzer. Specifically Eigen Space is used to extract and classify features and done comparison with samples given in training set. Collectively tested results showed that system can be successfully used for inferring six expression of any human: happiness, anger, sadness, surprise, fear and disgust.

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