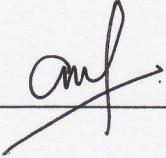


FACE RECOGNITION USING NEURAL NETWORK

ALFATIHAH BINTI ABDULLAH

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**LIST OF ABBREVIATIONS**

FR	Facial recognition
ANN	Artificial neural network
PCA	Principle component analysis
IC	Identification card
FPGA	Field-programmable gate array
ASCII	American Standard Code for Information Interchange
OCR	Optical character recognition
RGB	Red Green Blue
JPEG	Joint Photographic Experts Group
BMP	Bitmapped image format (Microsoft Corp.)
GIF	Graphics Interchange File; Graphics Interchange Format
ORL	The Olivetti and Oracle Research Laboratory
3D	Three-dimension

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## LIST OF SYMBOLS

$X_i$	Input grayscale Pixel
$b_i$	Output binarization Pixel
$net_j$	Activation function at hidden layer
$W_{ij}$	Weight between input layer and hidden layer
$\theta_j$	Bias weight at hidden layer
$I$	Input layer
$J$	Hidden layer
$\alpha$	Slope parameter which adjust the abruptness of the function
$\delta_j$	Error signal through hidden layer
$O_j$	Output at hidden layer
$\delta_k$	Error signal at the output layer
$W_{kj}$	Weight between output layer and hidden
$O_k$	Output at output layer
$W_{ij}$	Weight between input layer and hidden layer
$\Delta W_{ij}$	Adaptation weight between input ( $i$ ) layer and hidden layer ( $j$ )
$\eta$	Learning rate
$n$	Iteration number

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“I hereby acknowledge that the scope and quality of this thesis is qualified for the award of the Bachelor Degree of Electrical Engineering (Electronics)”

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## FACE RECOGNITION USING NEURAL NETWORK

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This thesis is submitted as partial fulfillment of the requirements for the award of the  
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