

ABSTRACT

Human interaction has various types of a model of one of them is human interaction and robots .There are several models interaction between humans and robots like make physical contact with the robot .But the interaction of the model still using buttons , switch and used a remote if there are many buttons will complicate the end user .To begin an interaction needed a system that applied to the head of robots to can be interwoven communication between humans and robots .But needed some device to make additional head of robots to can implement it .

For that required a model interaction that can ease the user.The interaction which will make use of the interaction visually to facilitate the process of interaction. Using the face recognition for recognizing users the voice recognition to process word or spoken sentence so that users could be promoted communication between human and robots. Face recognition algorithm using LBP (Local Binary Pattern) as feature extraction and classification process using the Nearest Neighbor. Using robot android smartphone as chief because it supports all the devices needed.

At this final project obtained LBP algorithm implemented has good accuracy at the time of the morning with an accuracy of 90% and 100% during the day. However it is difficult to recognize the conditions of night due to lack of light. To the angle of the face of the system will work optimally at an angle of 0^0 until 15^0 have accuracy 90% and for the distance between the camera and the face 0.5 meter until 1 meter get accuracy 90%.And test with threshold of 1.4 get results 90%.

Keywords: Android, Human Robot Intraction, Face Recognition, Local Binary Pattern.