IMPLEMENTATION OF GENDER CLASSIFICATION SYSTEM FOR PROMOTING TARGETING USING DEPTH-CAMERA

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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ABSTRACT

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This research is trying to prove that gender recognition by computer can be done in real time. Gender recognition can be used on many industries. This research purpose is to detect gender by using images of user (RGB image) and voice for promoting targeting. By using multi modalities, author believe that the result is more accurate than only using one factor. This research went on some processes to be able to detect gender by using visual image of face. Image processing algorithm were used on processing facial image, such as Linear Discriminant Analysis (LDA) algorithm. Autocorrelation is one from many methods that able to detect pitch from detected audio. *Kinect For Windows v2* was carried out as visual and audio sensor. Most Shown Result (MSR) algorithm was developed to predict gender based on multi modalities detection result. Many problems also found during experiments, such as input data problem, not matching algorithm, and small percentage of accuracy. In conclusion that detecting gender can be done by computer (real time or not) and many adjustment must be made to get proper and high accuracy result.

Keywords: Gender Recognition; Face recognition; Pitch detection; Kinect For Windows v2; Linear Discriminant Analysis; Autocorrelation

DEDICATION

I dedicate this work for the future of industries and also my country: Indonesia. Also, this work is dedicated for many people out there that working hard for making the world become better place by developing and also finding new technologies and ways to see and live this beautiful world.

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