Universiti Teknologi MARA (Perak)

Body Measurement System for Making Clothing Pattern

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DECLARATION

I certify that this thesis and the research to which it refers are the product of my own work and any ideas or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

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ABSTRACT

This thesis deals with the development of body measurement system for making clothing pattern. Body measurement system for making clothing pattern was developed to measure upper body parts which are shoulder width, body length, chest circumference and short sleeve to produce a clothing pattern for short sleeve round neck t-shirt. The objectives of the research are to identify parts of the human upper body should be measured to get upper body measurement and to develop a system to determine the body measurement for making clothing pattern using image processing. This research presents a method based on image processing which can extract the measurements of upper body based on reference point and distance measurement in MATLAB. Image processing using MATLAB is chosen because it can generate high speed result compare to another programming language. Graphical User Interface (GUI) in MATLAB library is been used to create the interface of the system. In this research, 50 image of primary student from Sekolah Kebangsaan Mohd Ariff Abdullah is used to get the measurement result. A few step need to follow in order to get the result. There are image preprocessing, image threshold and edge detection. The experiment results show that the lower of percentage accuracy system performance is still in the range of percentage limit which is 94%. As a conclusion, the new system has been developed and the measuring system using image processing in MATLAB can be applied in body measurement. This will enhanced the system in getting precise and accurate measurement and can be used anytime and anywhere.

TABLE OF CONTENTS

CONTENTS		PAGE
SUPERVISOR'S APPROVAL		ii
DECLARATION		iii
ACKNOWLEDGEMENT		iv
ABSTRACT		v
TABLE OF CONTENTS		vi
LIST OF FIGURES		ix
LIST OF TABLES		xi
CHAPTER1:INTRODUCTION		
1.1	Background of Study	1
1.2	Problem Statements	2
1.3	Objectives	3
1.4	Project Scopes	4
1.5	Research Significance	4
1.6	Summary	5
CHAPTER2:LITERATURE REVIEW		
2.1	Clothing Industry	6
2.2	Body Measurement	7
2.3	Clothing Pattern	10
2.4	Image Processing	10
2.5	Image Analysis	13
2.6	Image Segmentation	14
2.6.1	Thresholding	14
2.6.2	Edge Detection	15
2.7	Summary	17

CHAPTER3:RESEARCH METHODOLOGY

3.1	Research Framework	18
3.2	Theoretical Study	21
3.3	Empirical Study	22
3.4	Technique Identification	23
3.5	Architecture Design	24
3.6	Evaluation	26
3.7	Summary.	27

CHAPTER4:EMPIRICAL STUDY

4.1	Knowledge Acquisition	28
4.2	Data Acquisition	29
4.3	Data Analysis	32
4.4	Summary	33

CHAPTER5:ARCHITECTURE DESIGN

5.1	Image Processing	35
5.2	Edge Detection Process	43
5.3	Measure Distance Process	44
5.4	Interface Design	46
5.5	Hardware and Software Specification	48
5.6	Summary	49

CHAPTER6:EVALUATION

6.1	System Design Overview	50
6.2	System Result	52
6.3	Documentation	54
6.4	Summary	55