

## CONTENTS

<b>APPROVAL</b>	ii
<b>SELF DECLARATION AGAINST PLAGIARISM</b>	iii
<b>ABSTRACT</b>	iv
<b>ABSTRAK</b>	v
<b>DEDICATION</b>	vi
<b>ACKNOWLEDGMENTS</b>	vii
<b>CONTENTS</b>	viii
<b>LIST OF TABLES</b>	x
<b>LIST OF FIGURES</b>	xi
<b>LIST OF ACRONYMS</b>	xiii
<b>LIST OF NOTATIONS</b>	xiv
<b>1 INTRODUCTION</b>	1
1.1 Rationale . . . . .	1
1.2 Theoretical Framework . . . . .	2
1.3 Conceptual Framework and Paradigm . . . . .	3
1.4 Statement of the Problem . . . . .	4
1.5 Objective . . . . .	5
1.6 Hypothesis . . . . .	5
1.7 Scope and Delimitation . . . . .	5
1.8 Significance of the Study . . . . .	6
<b>2 REVIEW OF LITERATURE AND STUDIES</b>	7
2.1 Related Literatures . . . . .	7
2.2 Related Studies . . . . .	14
2.2.1 Image Segmentation . . . . .	14
<b>3 RESEARCH METHODOLOGY</b>	19
3.1 Design Process . . . . .	19
3.1.1 Building the Model . . . . .	20
3.1.2 Locating the Object (Head and Shoulder) Area . . . . .	22

---

3.1.3	Determining Stable Frames Duration . . . . .	25
3.1.4	Classification . . . . .	26
3.2	Difference with Previous Study . . . . .	28
3.3	Contribution . . . . .	29
<b>4</b>	<b>EXPERIMENT AND ANALYSIS</b>	<b>30</b>
4.1	Experiment Design . . . . .	30
4.1.1	Data Set . . . . .	30
4.1.2	Experiment Measurement . . . . .	34
4.2	Experiment Analysis . . . . .	35
4.2.1	Result of Experiment . . . . .	35
4.2.2	Evaluation and Analysis . . . . .	37
<b>5</b>	<b>CONCLUSION AND RECOMMENDATIONS</b>	<b>38</b>
5.1	Conclusions . . . . .	38
5.2	Recommendations . . . . .	38
	<b>BIBLIOGRAPHY</b>	<b>39</b>
	<b>Appendices</b>	<b>40</b>
	<b>A</b>	<b>42</b>
	<b>B</b>	<b>43</b>
	<b>C Curriculum Vitae</b>	<b>51</b>