

# Contents

<b>Approval Page</b>	<b>ii</b>
<b>Declaration of Originality</b>	<b>iii</b>
<b>Abstract</b>	<b>iv</b>
<b>Abstrak</b>	<b>v</b>
<b>Dedication</b>	<b>vi</b>
<b>Acknowledgments</b>	<b>vii</b>
<b>Preface</b>	<b>viii</b>
<b>Contents</b>	<b>ix</b>
<b>List of Tables</b>	<b>xi</b>
<b>List of Figures</b>	<b>xii</b>
<b>1 INTRODUCTION</b>	<b>1</b>
1.1 Rationale . . . . .	1
1.2 Theoretical Framework . . . . .	2
1.3 Statement of the Problem . . . . .	3
1.4 Objective . . . . .	3
1.5 Hypotheses . . . . .	3
1.6 Conceptual Framework . . . . .	4
1.7 Scope and Delimitation . . . . .	5
1.8 Importance of the Study . . . . .	5
<b>2 REVIEW OF LITERATURE AND STUDIES</b>	<b>6</b>
2.1 Previous Works . . . . .	6
2.1.1 Introduction of Interaction . . . . .	6
2.2 Related Literature . . . . .	8
2.2.1 Feature Extraction . . . . .	8
2.2.2 Matching Comparison . . . . .	11
<b>3 Research Methodology</b>	<b>13</b>
3.1 Spatial Attack Detection System Design . . . . .	13
3.2 Design Process . . . . .	13
3.2.1 Converting Video into Frame Block . . . . .	13
3.2.2 Feature Extraction Block . . . . .	15
3.2.3 Keyframe Forming Block . . . . .	19
3.2.4 Keyframe Sampling Block . . . . .	21
3.2.5 Physical Filtering Block . . . . .	22
3.2.6 Feature Extraction from Candidate Video Block . . . . .	23

3.2.7	Find Distance Value Block . . . . .	23
<b>4</b>	<b>EXPERIMENT AND ANALYSIS</b>	<b>26</b>
4.1	Pre Experiment . . . . .	26
4.1.1	Threshold for Unknown Video . . . . .	26
4.1.2	Determining the Number of Keyframe Sampling . . . . .	29
4.2	Experiment Design . . . . .	30
4.2.1	Experiment Data . . . . .	30
4.2.2	Scenario Scenes . . . . .	31
4.2.3	Experiment Measurement . . . . .	31
4.3	Experiment Analysis . . . . .	31
4.3.1	Result of Experiment Scenario . . . . .	31
<b>5</b>	<b>CONCLUSIONS AND RECOMMENDATIONS</b>	<b>35</b>
5.1	Conclusions . . . . .	35
5.2	Recommendations . . . . .	35
	<b>Bibliography</b>	<b>36</b>
	<b>Appendices</b>	<b>38</b>
.1	Appendix A FIND THRESHOLD . . . . .	40
.2	Appendix B FIND N VALUE . . . . .	43
.3	Appendix C EXPERIMENT RESULT . . . . .	46