

TABLE OF CONTENTS

APPROVAL FORM	ii
PROJECT FORM	iii
PREFACE	iv
TABLE OF CONTENTS	v
LIST OF FIGURES	vii
LIST OF TABLES	viii
NOMENCLATURE.....	ix
ABSTRACT	1
CHAPTER 1 INTRODUCTION	2
1.1. Background	2
1.2. Research Problem.....	3
1.3. Originality	3
1.4. Aim of the Research.....	3
1.5. Research Outcomes	3
1.6. Scope of Research	4
CHAPTER 2 LITERATURE REVIEW AND THEORETICAL BACKGROUND	5
2.1. Literature Review	5
2.2. Hypothesis.....	8
2.3. Theoretical Background	8
2.2.1. Emotion	8
2.2.2. Stimulus.....	11
2.2.3. Bio-parameters	13
2.2.4. Machine Learning (ML).....	15
CHAPTER 3 RESEARCH METHODOLOGY	24
3.1. Location and Time	24
3.2. Research Method.....	24
3.2.1. System Design	24
3.2.2. Research Flowchart	26
CHAPTER 4 RESULT AND DISCUSSION	33

4.1.	Data Validation	33
4.2.	Classification.....	35
4.2.1.	Classification With Raw Data	36
4.2.2.	Classification With Data Cleaning	41
4.2.3.	The Variation of The Number of Estimators.....	47
4.2.4.	Classification Using Bio-Parameters and Questionnaire Data.....	48
4.2.5.	Overfitting	50
CHAPTER 5 CONCLUSION, LIMITATIONS, AND RECOMMENDATIONS		54
5.1.	Conclusion	54
5.2.	Limitations	54
5.3.	Recommendations	55
REFERENCES.....		56
APPENDIX.....		61
1.	An Integrated Galvanic Skin Response; PP Interval, Pulse Rate Variability, and Galvanic Skin Response.....	61
2.	The Data Measurement (with raw data)	62
3.	The Validation Data.....	76