

TABLE OF CONTENTS

COVER PAGE.....	i
DUAL DEGREE PROGRAM STATEMENT.....	ii
RECOMMENDATION FORM	iii
QUALIFICATION FORM.....	iv
LETTER OF APPROVAL	v
DECLARATION	vi
DEDICATION	vii
ACKNOWLEDGMENTS	viii
TABLE OF CONTENTS.....	ix
LIST OF TABLES	xi
LIST OF FIGURES	xii
ABSTRACT	xiii
CHAPTER 1 INTRODUCTION.....	14
1.1 Background.....	14
1.2 Problem Formulation.....	18
1.3 Limitations	19
1.4 Objective of Research.....	19
1.5 Benefits of Research.....	19
CHAPTER 2 LITERATURE REVIEW	20
2.1 Ticketing System.....	20
2.2 Service Management	21
2.3 Forecasting.....	24
2.4 Artificial Neural Network.....	26
CHAPTER 3 THEORITICAL BACKGROUND.....	30
3.1 Multivariate Regression.....	30
3.2 Artificial Neural Networks	30
3.3 Model Evaluation	33
CHAPTER 4 RESEARCH METHODS.....	35
4.1 Research Tools.....	35
4.2 Research Method.....	35

4.3	Pre-analysis Data.....	37
4.4	Pre-processing Data.....	38
CHAPTER 5 EXPERIMENTAL RESULTS.....		43
5.1	Processing Data.....	43
5.2	Multivariate Regression Model.....	44
5.2.1	Attribute selection	44
5.2.2	Multivariate linear regression model.....	45
5.3	Artificial Neural Networks Model	50
5.4	Model Comparison.....	52
CHAPTER 6 CONCLUSION AND RECOMMENDATION		55
6.1	Conclusion	55
6.2	Recommendation.....	55
REFERENCES		56
APPENDIX		60