

**SHARIAH COMPLIANT GEOGRAPHICAL  
INFORMATION SYSTEMS MODEL FOR TOURISM IN  
SMART CITIES**

**BY**

**JAMILAH OSAMA A. RASHID**

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## **ABSTRACT**

The technology has developed tremendously in recent years, this is because there have been most people prefer to use Smart devices and express services because of speed, comfort, save of information and procedures. This thesis includes several procedures for mapping Shariah Compliant tourist locations in Smart City factors. By analysing various factors of Shariah Compliant tourist activity locations in Smart Cities. While previous research focuses on tourism factors as well as their impact on Smart Cities, they do not effectively distinguish Shariah Compliant or non-Shariah Compliant. Also, many studies have focused on geographic information systems, Shariah-compliant tourism, and Smart Cities in different ways, studies focusing on Shariah Compliant tourism activities in Smart Cities, encouraging Shariah Compliant tourism locations, and Shariah Compliant Smart Cities are limited. Various meetings and questionnaires have been performed; were led on specialists and vacationers through two sorts of polls were conducted; the principal survey clarified the regulatory pieces of areas of Shariah Compliant the tourism industry administrations. The second questionnaire pursuits to decide the elements that assist in developing a Shariah Compliant tourism Smart City. While numerous varieties of information analysed have been performed to obtain accurate results. Hence, this thesis purpose is evaluation and analysed of the sites of Shariah Compliant tourism in Kuala Lumpur as a Smart City using geographic information systems. The findings indicated that Kuala Lumpur is considered as one of the most distinguished Cities in Shariah Compliant tourism services were studied and analysed. It has large, multiple development activities, distinguished, effective and coherent technological services. The thesis contributes to both research and analysed; by fulfilling the research gaps stated above and improve organizations' best locations for Shariah Compliant tourism services in Smart City were studied and analysed.

## ملخص البحث

لقد تطورت التكنولوجيا بشكل هائل في السنوات الأخيرة، وذلك لأن معظم الناس يفضلون استخدام الأجهزة الذكية والخدمات السريعة بسبب السرعة، والراحة، وحفظ المعلومات والإجراءات. وتتضمن هذه الاطروحة عدة إجراءات لرسم خرائط لعوامل المواقع السياحية المتوافقة مع أحكام الشريعة الإسلامية في المدينة الذكية. من خلال تحليل العوامل المختلفة لمواقع النشاط السياحي المتوافقة مع الشريعة الإسلامية في هذه المدن. بينما تركز الأبحاث السابقة على عوامل السياحة بالإضافة إلى تأثيرها على المدن الذكية، فإنها لا تميز بشكل فعال بين المتوافق مع الشريعة أو غير المتوافق معها. وقد ركزت العديد من الدراسات على أنظمة المعلومات الجغرافية، والسياحة المتوافقة مع الشريعة الإسلامية والمدن الذكية بطرق مختلفة، والدراسات التي تركز على تشجيع الأنشطة والمواقع السياحية المتوافقة مع الشريعة الإسلامية في المدن الذكية محدودة. تم إجراء اجتماعات واستبيانات مختلفة قد أجريت على مجموعة من المتخصصين والمصطافين من خلال نوعين من الاستبيانات وقد أشتمل المسح الرئيسي الأجزاء التنظيمية للمناطق المتوافقة مع أحكام الشريعة في إدارات صناعة السياحة. وكما يسعى الاستبيان الثاني إلى تحديد العناصر التي تساعد في تطوير مدينة سياحية ذكية متوافقة مع الشريعة الإسلامية. بينما تم إجراء العديد من أنواع المعلومات التي تم تحليلها للحصول على نتائج دقيقة. ومن ثم، فإن الغرض من هذه الاطروحة هو تقييم وتحليل مواقع السياحة المتوافقة مع الشريعة الإسلامية في كوالالمبور كمدينة ذكية باستخدام أنظمة المعلومات الجغرافية. وقد أشارت النتائج إلى أن كوالالمبور تعتبر واحدة من أكثر المدن تميزًا في خدمات السياحة المتوافقة مع الشريعة الإسلامية التي تمت دراستها وتحليلها. وقد وجد ان لديها أنشطة تنمية كبيرة ومتعددة وخدمات تكنولوجية متميزة وفعالة ومتماسكة. وعلى حد على الباحثة تبين ان الأطروحة التي تمت دراستها وتحليلها انها سوف تساهم في سد الثغرات البحثية المذكورة أعلاه وتحسين أفضل مواقع المؤسسات للخدمات السياحية المتوافقة مع الشريعة الإسلامية في المدينة الذكية.

## **APPROVAL PAGE**

The thesis of Jamilah Osama A. Rashid has been approved by the following:

---

Sharyar Wani  
Supervisor

---

Ali A. Alwan AlJuboori  
Co-supervisor

---

Aznan Zuhid Bin Saidin  
Co-supervisor

---

Akram Mohammed Zeki Khedher  
Internal Examiner

---

Nurhanina Rafai  
Internal Examiner

---

Burhanuddin bin Mohd Aboobaider  
External Examiner

---

Asadullah Shah  
Chairman

## DECLARATION

I hereby declare that this thesis is the result of my own investigations, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole for any other degrees at IIUM or other institutions.

Jamilah Osama A. Rashid

Signature Jamilah Osama A. Rashid

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Jamilah Osama A. Rashid

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Date

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## TABLE OF CONTENTS

Abstract .....	ii
Abstract in Arabic .....	iii
Approval Page.....	iv
Declaration.....	v
Copyright Page.....	vi
Acknowledgements.....	vii
Table of Contents .....	viii
List of Tables .....	xiii
List of Figures .....	xvi
List of Maps .....	xix
List of Abbreviation.....	xxi
<b>CHAPTER ONE: INTRODUCTION .....</b>	<b>1</b>
1.1 Overview .....	1
1.2 Background of the Study.....	2
1.3 Statement of the Problem.....	5
1.4 Research Objectives .....	6
1.5 Research Questions .....	6
1.6 Scope of the Research .....	7
1.7 Research Hypotheses .....	9
1.8 Organisation of the Thesis .....	9
1.9 Chapter Summary.....	10
<b>CHAPTER TWO: LITERATURE REVIEW.....</b>	<b>11</b>
2.1 Introduction .....	11
2.2 The Islamic Maqasid in Tourism in the Islamic World .....	11
2.3 Previous Study on Tourism Base on Shariah Compliant .....	12
2.4 Related Studies for Shariah Compliant .....	14
2.5 Previous Study on Geographic Information System (GIS).....	17
2.6 Related Studies for Geographic Information System (GIS) .....	19
2.7 Previous Study on Smart City .....	22
2.8 Related Studies for Smart City.....	27
2.9 Comparison Between Three Smart Cities .....	30
2.9.1 Al-Riyadh City.....	31
2.9.2 Abu Dhabi City.....	32
2.9.3 Kuala Lumpur City .....	34
2.10 Previous Study On Real-Time Guidance For Society.....	36
2.11 Related Studies for Real-Time Guidance for Society .....	37
2.12 Previous Study on Quality Of Life.....	37
2.13 Related Studies for Quality of Life .....	38
2.14 Previous Study on City Services .....	39
2.15 Related Studies for City Services.....	39
2.16 Discussion .....	40
2.17 Research Gaps .....	41
2.18 Chapter Summary.....	42



<b>CHAPTER THREE: RESEARCH METHODOLOGY .....</b>	<b>43</b>
3.1 Introduction .....	43
3.2 Philosophical Overview .....	43
3.2.1 Quantitative Data .....	44
3.2.2 Qualitative Data .....	45
3.3 Conceptualization of the Study and Development of Hypothesis .....	47
3.4 Research Paradigm .....	50
3.5 Sampling Design Process .....	52
3.6 Proposed Development of the Model Flow .....	52
3.7 Study Population .....	54
3.8 Pre-Testing the Survey .....	54
3.9 Pilot Test .....	56
3.10 Final Survey Administration .....	56
3.11 Proposed Analytical Technique .....	57
3.12 Internal Consistency .....	57
3.13 Indicator Reliability .....	58
3.14 Convergent Validity .....	59
3.15 Discriminant Validity .....	60
3.16 Chapter Summary .....	60
<b>CHAPTER FOUR: MAQASID AL-SHARIAH .....</b>	<b>62</b>
4.1 Introduction .....	62
4.2 Islam The Way Of Life .....	62
4.3 The Basic Moralities of the Islamic Religion .....	63
4.4 Public Benefits (Maslahah) .....	64
4.5 Maqasid Al-Shariah Factors .....	66
4.5.1 Essentials / Necessities (Dharuriyyat) .....	66
4.5.2 Complementary Benefits (Hajiyyat) .....	70
4.5.3 Desirables or Luxuries (Tahsiniyyat) .....	71
4.6 Maqasid Al-Shariah: the Concept, Meaning and Purpose .....	72
4.6.1 Maqasid .....	72
4.6.2 Shariah .....	73
4.7 Maqasid Al-Shariah .....	74
4.8 The Maqasid Al-Shariah Ecosystem For This Research .....	76
4.9 Maqasid Al-Shariah: then and Now .....	78
4.10 The Traditional Maqasid Al-Shariah .....	78
4.11 The “Modern-Day” Maqasid Al-Shariah .....	80
4.12 The Compliance Of Maqasid Al-Shariah .....	81
4.13 Reflecting the Conventional Indicators in Relation to Maqasid Al-Shariah .....	81
4.14 Maqasid Al-Shariah and Tourism .....	82
4.15 The Difference Between Maqasid Al-Shariah and Shariah Compliant ...	84
4.16 Chapter Summary .....	84
<b>CHAPTER FIVE: SMART CITY .....</b>	<b>85</b>
5.1 Introduction .....	85
5.2 Overview of the Smart City .....	85
5.3 Maqasid Shariah, Smart City and Technology .....	86
5.4 Smart City Characteristics .....	92
5.5 Maqasid Shariah, Smart City and Tourism .....	96

5.6 The Effect of Smart Cities on the Individual, Society, Maqasid Al-Shariah and Tourism .....	97
5.7 Chapter Summary.....	101

**CHAPTER SIX: MAQASID AL-SHARIAH TOURISM SERVICES IN SMART CITY..... 102**

6.1 Introduction .....	102
6.2 The Maqasid Al-Shariah Tourism Services in Smart City Model .....	102
6.3 The Identified Maqasid Al-Shariah Indicators Sub-Indicators and Their Rankings.....	103
6.4 The Weightage and Consistency Ratios (CRS) Through the Super Decision Software .....	105
6.5 The Maqasid Al-Shariah Tourism Services Model.....	105
6.6 The Future of Maqasid Al-Shariah Tourism Services In Smart City.....	106
6.7 Sample Design and Procedure .....	107
6.7.1 The Importance of Maqasid Al-Shariah in Creating Smart Cities .....	108
6.7.2 The Benefits Designing of Shariah-Compliant Smart Cities, Keeping Maqasid Al-Shariah in View .....	110
6.7.3 The Elements of Shariah-Compliant Tourism Services that are Important in Building Smart Cities.....	112
6.7.3.1 The Classify of Using the Elements of Shariah Compliant Tourism Services in Smart City.....	112
6.7.3.2 Essentials .....	115
6.7.3.3 Complementary .....	120
6.7.3.4 Optional .....	123
6.7.4 Kuala Lumpur as Shariah-Compliant Smart City.....	127
6.7.5 The Comparison of the Most Famous Cities that are to be Shariah-Compliant .....	129
6.8 Conclusion.....	131
6.9 Summary .....	132

**CHAPTER SEVEN: GIS DATA ANALYSIS..... 133**

7.1 Introduction .....	133
7.2 About the Study Area.....	133
7.3 The Geographic Information System Structure .....	136
7.3.1 Processing Data .....	136
7.3.2 Data Layout .....	137
7.4 Analysis of Roads and Transport Network Locations in Kuala Lumpur. 144	
7.4.1 Analysis of Bank Locations in Kuala Lumpur .....	148
7.4.2 Analysis of Buildings Locations in Kuala Lumpur .....	152
7.4.3 Analysis of Hotels Locations in Kuala Lumpur .....	156
7.4.4 Analysis of Malls Locations in Kuala Lumpur.....	161
7.4.5 Analysis of Masjid Locations in Kuala Lumpur.....	166
7.4.6 Analysis of Lakes and Public Parks Locations in Kuala Lumpur 171	
7.4.7 Analysis of Hospital Locations in Kuala Lumpur .....	175
7.4.8 Analysis of Gas Station Locations in Kuala Lumpur .....	179
7.4.9 Analysis of Residential Suites Locations in Kuala Lumpur .....	183
7.4.10 Analysis of Sport Club Public Locations in Kuala Lumpur .....	188
7.4.11 Analysis of Museums Locations in Kuala Lumpur .....	192

7.4.12 Analysis of Stadiums Locations in Kuala Lumpur.....	197
7.4.13 Analysis of Golf Club Locations in Kuala Lumpur.....	202
7.4.14 Analysis of Other Service Locations in Kuala Lumpur.....	206
7.5 Chapter Summary.....	213
<b>CHAPTER EIGHT: RESULTS AND DISCUSSIONS.....</b>	<b>214</b>
8.1 Introduction.....	214
8.2 The Questionnaire Structure for Shariah Demands for Smart City.....	214
8.3 Operational Definition of Measured Shariah Compliant Tourism Services.....	215
8.4 Real-Time Guidance For Society.....	215
8.4.1 Exploit Multiple Transportation.....	215
8.4.2 Exploit Multiple Access to Shariah Compliant Malls.....	216
8.4.3 Exploit Multiple Accesses to Shariah Compliant Areas of Education.....	216
8.4.4 Exploit Multiple Access to Shariah Compliant Hotels.....	216
Exploit Multiple Access to Public Park Facilities.....	217
8.4.5 Exploit Multiple Accesses to Halal Restaurant.....	217
8.5 Quality of Life.....	218
8.6 City Services.....	220
8.7 Shariah Demands for Smart City.....	221
8.8 Pilot Test of the Survey Quality.....	224
8.9 Factors and Criteria of Model Construction.....	225
8.10 Profile of Respondents.....	226
8.11 Profile of Elements of the Questionnaire.....	231
8.12 Data Reduction and Profile of Modeling Shariah Compliant City Suitable for Creating a Smart City.....	232
8.13 Reliability Analysis.....	234
8.14 The Relationship Among the Variables.....	235
8.15 Operational Definition of Measured for Maqasid Al-Shariah Tourism in Smart City.....	238
8.16 Data Analysis for Factors a Shariah Compliant Smart City (Normality Test).....	255
8.17 Pre-Testing the Survey.....	256
8.18 Final Survey Administration.....	257
8.19 Descriptive Analysis of Demographic Variables.....	258
8.20 Discriminant Validity.....	259
8.21 Indicator Reliability.....	260
8.22 INTERNAL CONSISTENCY.....	261
8.23 Chapter Summary.....	262
<b>CHAPTER NINE: CONCLUSION.....</b>	<b>263</b>
9.1 Introduction.....	263
9.2 The Factors Influencing The Shariah Demands To Creating A Smart City.....	263
9.3 Build Smart Cities.....	263
9.4 Shariah Compliant Smart City Through (Proximity).....	264
9.5 Shariah Compliant Through Neighborhood.....	267
9.6 Shariah Compliant Smart Cities Through (Analysis Buffer).....	269
9.7 The Idea for Shariah Compliant.....	278

9.8 Summary of Geographical Information Systems GIS and Questionnaire Survey .....	278
9.9 Future Work .....	281
9.10 Chapter Summary.....	281

<b>REFERENCES.....</b>	<b>282</b>
------------------------	------------

<b>APPENDIX A: QUESTIONNAIRE CONSTRUCTS OF MODELING SHARIAH COMPLIANT FOR CREATING A SMART CITY .....</b>	<b>324</b>
<b>APPENDIX B: INTERVIEW .....</b>	<b>328</b>



## LIST OF TABLES

Table 2.1 Summary of previous studies about Shariah Compliant Tourism	17
Table 2.2 Summary of previous studies about Geographic information system (GIS)	21
Table 2.3 Some name of Cities mentioned in the Quran holy	24
Table 2.4 Summary of previous studies about Smart City	30
Table 2.5 Summary of previous studies about real-time guidance for society	37
Table 2.6 Summary of previous studies about City services	40
Table 5.1 Some key features of Maqasid Shariah services in Smart Cities	88
Table 5.2 Some key factors of Smart City services related public benefits (Maslahah)	94
Table 5.3 Some of services in Kuala Lumpur related to the Maqasid Al-Shariah	97
Table 6.1 The respective ranking of the indicator	103
Table 6.2 The ranked sub-indicators	104
Table 6.3 The respondents	113
Table 7.1 The number of Shariah Compliant tourism services in the study area	138
Table 7.2 The Shariah Compliant tourism Services in the study area	141
Table 7.3 The numbers of banks in the study area (Zones)	150
Table 7.4 The Buildings in the study area (Zones)	154
Table 7.5 The numbers of (Hotels Shariah and non-Shariah) in the study area	157
Table 7.6 The percentage for (Hotels Shariah and non-Shariah) in the study area (Zones)	159
Table 7.7 The percentage for Malls in the study area (Zones)	164
Table 7.8 The percentage for Masjid in the study area (Zones)	169
Table 7.9 The percentage for Lakes and Public parks in the study area (Zones)	173
Table 7.10 The Hospital in the study area (Zones)	177
Table 7.11 The percentage for Gas station in the study area (Zones)	181

Table 7.12 The percentage for Residential Suites in the study area (Zones)	186
Table 7.13 The percentage of Sport club public in the study area (Zones)	190
Table 7.14 The percentage for Museums in the study area (Zones)	195
Table 7.15 The Stadiums in the study area (Zones)	200
Table 7.16 The percentage of Golf clubs in the study area (Zones)	204
Table 7.17 The other services in the study area	209
Table 7.18 The other services in the study area (Zones)	211
Table 8.1 Survey Questionnaire Sections	214
Table 8.2 Measured Operational Definition for Real-Time Guidance	217
Table 8.3 Measured Operational Definition for Quality-of-Life Likert Scales	219
Table 8.4 Measured Operational Definition for City Services Likert Scales	221
Table 8.5 Measured operational definition for Shariah demands for a Smart	223
Table 8.6 The phases pilot test of the survey	225
Table 8.7 Overview of Response Rates	226
Table 8.8 Gender of Respondents	227
Table 8.9 Age group of respondents	227
Table 8.10 Level of use maps during travel of respondents	228
Table 8.11 Educational Level of respondents	229
Table 8.12 Occupation of respondents	230
Table 8.13 Awareness of the concept of Smart City of respondent	230
Table 8.14 Elements of the questionnaire	231
Table 8.15 Total eigenvalues and variance for modeling Shariah Compliant City suitable for creating a Smart City	232
Table 8.16 A simple t-test on items measuring for modeling Shariah Compliant City suitable for creating a Smart City	233
Table 8.17 Correlation analysis between user real- time guidance for society and Shariah demands for Smart City	234
Table 8.18 Cornbach's alpha for success factors (dependent variable)	234

Table 8.19 Descriptive profile of variables	235
Table 8.20 Correlation analysis among the variables	236
Table 8.21 Regression analysis for variables predicting Shariah	238
Table 8.22 Summaries of the responses	253
Table 8.23 Normality test by Kurtosis and Skewness	255
Table 8.24 Response Rates	259
Table 8.25 Sample Statistics	260
Table 8.26 Reliability Statistics	261



## LIST OF FIGURES

Figure 1.1 Illustrates of the main connections between its topics.	5
Figure 1.2 Organisation of the Thesis	10
Figure 2.1 Spatial Data Standards at the global level	18
Figure 2.2 Spatial Standards for the land domain	18
Figure 2.3 The elements of Old City	23
Figure 2.4 The elements of City at present	26
Figure 2.5 The Smart City Standards	26
Figure 2.6 Comparison between some Smart Cities factors	36
Figure 2.7 The Conceptual framework of the main elements	41
Figure 3.1 The framework of the qualitative, quantitative and mixed methods	47
Figure 3.2 The Elements Conceptualization of Hypothesis	49
Figure 3.3 The GIS Framework	50
Figure 4.1 1 Maqasid Al Shariah Factors	72
Figure 5.1 Some key features of Maqasid Shariah services in Smart Cities	87
Figure 5.2 Smart Cities Wheel (Yau, et al., 2016)	95
Figure 6.1 The respective ranking of the indicator	104
Figure 6.2 The respective ranking of the indicator	104
Figure 6.3 The Maqasid Al Shariah Model	106
Figure 7.1 The number of Shariah Compliant tourism services in the study area	138
Figure 7.2 The percentage of Shariah Compliant tourism Services in the study area (Zones)	142
Figure 7.3 The percentage for Banks in the study area (zones)	150
Figure 7.4 The percentage for Buildings in the study area (Zones)	154
Figure 7.5 The percentage for (Hotels Shariah and non-Shariah) in the study area	158
Figure 7.6 The percentage for (Hotels Shariah and non-Shariah) in the study area (Zones)	159



Figure 7.7 The percentage for Malls in the study area (Zones)	164
Figure 7.8 The percentage for Masajid in the study area (Zones)	169
Figure 7.9 The percentage for Lakes and Public parks in the study area (Zones)	173
Figure 7.10 The percentage for Hospital in the study area (Zones)	177
Figure 7.11 The percentage for Gas station in the study area (Zones)	181
Figure 7.12 The percentage for Residential suites in the study area (Zones)	186
Figure 7.13 The percentage of Sport club public in the study area (Zones)	190
Figure 7.14 The percentage for Museums in the study area (Zones)	195
Figure 7.15 The percentage for Stadiums in the study area (Zones)	200
Figure 7.16 The percentage of Golf clubs in the study area (Zones)	204
Figure 7.17 The percentage for other services in the study area	210
Figure 7.18 The other services in the study area (Zones)	211
Figure 8.1 Elements of the study	215
Figure 8.2 The model of Shariah demands for Smart City elements	225
Figure 8.3 The model of Shariah demands for Smart City elements	225
Figure 8.4 Gender of Respondents	227
Figure 8.5 Age group of respondents	228
Figure 8.6 Level of use maps during travel of respondents	228
Figure 8.7 Educational level of respondents	229
Figure 8.8 Occupation of respondents	230
Figure 8.9 Awareness of the concept of Smart City of respondent	231
Figure 8.10 Elements of the questionnaire	232
Figure 9.1 The nearest neighbor	268
Figure 9.2 Average nearest neighbor	269
Figure 9.3 Mode of Operation Source: (Santhiman, 2006)	272
Figure 9.4 The Solid Waste Management source from: United Nations	273
Figure 9.5 The idea of the alternative project Source: The format is based on study data.	274

Figure 9.6 Figure 9.5 Alternative New York City Geometry of buildings	276
Figure 9.7 Electromagnetic waves Source: (Transmitter – Wikipedia, 2019)	278
Figure 9.8 This research formulated the hypothesis	280



## LIST OF MAPS

Map 7.1 The Area Study	135
Map 7.2 The distribution of Shariah Compliant tourism services in the study area (Natural)	139
Map 7.3 The distribution of Shariah Compliant tourism services in the study area	140
Map 7.4 The distribution of Shariah Compliant tourism services in the study area (Zones)	143
Map 7.5 The distribution of transportation modalities in the study area	145
Map 7.6 The distribution of Transportation modalities in the study area (Zones)	147
Map 7.7 The distribution of the Banks in the study area	149
Map 7.8 The distribution of the Banks in the study area (zones)	151
Map 7.9 The distribution of the buildings in the study area	153
Map 7.10 The distribution of the buildings in the study area (Zones)	155
Map 7.11 The distribution of (Hotels Shariah and non-Shariah) in the study area	158
Map 7.12 The distribution of (Hotels Shariah and non-Shariah) in the study area (Zones)	160
Map 7.13 The distribution of the Malls in the study area	163
Map 7.14 The distribution of the Malls in the study area (Zones)	165
Map 7.15 The distribution of the Masajid in the study area	168
Map 7.16 The distribution of the Masajid in the study area (Zones)	170
Map 7.17 The distribution of Lakes & Public parks in the study area	172
Map 7.18 The distribution of Lakes & Public parks in the study area (Zones)	174
Map 7.19 The distribution of the Hospital in the study area	176
Map 7.20 The distribution of the Hospital in the study area (Zones)	178
Map 7.21 The distribution of Gas station in the study area	180
Map 7.22 The distribution of Gas station in the study area (Zones)	182
Map 7.23 The distribution of Residential suites in the study area	185

Map 7.24 The distribution of Residential Suites in the study area (Zones)	187
Map 7.25 The distribution of Sport club public in the study area	189
Map 7.26 The distribution of Sport club public in the study area (Zones)	191
Map 7.27 The distribution of Museums in the study area	194
Map 7.28 The distribution of Museums in the study area (Zones)	196
Map 7.29 The distribution of Stadiums in the study area	199
Map 7.30 The distribution of Stadiums in the study area (Zones)	201
Map 7.31 The distribution of Golf clubs in the study area	203
Map 7.32 The distribution of Golf clubs in the study area (Zones)	205
Map 7.33 The distribution of other services in the study area	210
Map 7.34 The distribution of other services in the study area (Zones)	212
Map 9.1 The distribution of the proximity of the study area	266
Map 9.2 The distribution of the buffer in the study area	270
Map 9.3 The idea of the alternative project in the study area	275
Map 9.4 The distribution of the services in the study area	277

## LIST OF ABBREVIATION

GIS:	Geographical Information Systems
KL:	Kuala Lumpur.
UTM:	Universal Transvers Mercator.
WGS:	World Geodetic System Esri online (2017).
IT:	Information Technology



# CHAPTER ONE

## INTRODUCTION

### 1.1 OVERVIEW

Tourism is an important, necessary and supportive activity for any country's economic development. Especially in Islamic nations, Shariah Compliant tourism is characterized by many attractive factors in proportion to Islamic morals where tourism components are among the most important, prominent activities that help establish economic rules in addition to the speed of its activity and the increasingly diversified production. During the last part of the twentieth century, the phenomenal rapid developments in Geographical Information Systems (GIS) have invaded most areas of technological studies Smart in project management, science and research.

This activity resulting from information technology (IT) activity developments have been strongly stimulated competitive, innovative worked to dramatically change with new features, programs, speed and capabilities, moving away from the ancient uses era to strategic information systems (Shah and Wani, 2015). GIS it is a tool with unique capabilities that helps to ascertain, make most effective, intelligent decisions because it relies upon collecting, sorting and analysing spatial data. This has resulted in the provision of huge, varied information in addition to its accuracy and speed of arrival due to the revolution of the global internet.

The existence of this network serves as a safety valve for the exchange of experiences, global perceptions based on analysis of aerial images, spatial data electronic tables and digital maps of various fields. Examples include weather forecast, climate, areas of earthquakes, volcanic eruptions, cyclone zones, areas of historical relics, exploration for oil, mineral resources and groundwater. GIS has made radical changes in the effective creativity, participation, competition in the mindset of people with regard to creating/exchanging information, access to graphical work anywhere in the world and access to all users. Also, GIS provides successful maps that stimulate, differentiate views while attracting users to augment their ability to transmit and

interpret. GIS technology makes it possible to develop modern tourism applications using maps and modern mechanisms of analysis along with various types of data (Jovanović and Njeguš, 2013). Research work can enable a creation of the framework to integrate the networks of computing devices and geographical information systems (GIS) for modelling a Smart City.

This will pave way to inculcating the networks for Shariah-Compliant features in the future. With the development of a wide range of applications in the modelling, concepts like remote sensing, maps sciences, economics, computer science and many more will play an important role in developing a Smart City. Shariah features, in Smart City will identify a flexible ground to promote Islamic spots, destinations for residents, tourists such as hotels, restaurants, museums, all tourism and entertainment services. At the same time, when the Shariah Compliant tourism industry is flourishing, it catalyse the economic development of those tourist destinations. Against this backdrop, the present thesis will focus on analysing some tourist service locations in a Smart City (Kuala Lumpur). The concept of Shariah Compliant tourism is a process Integrate in all aspects interlinked Islamic values tourism activities. The value of Shariah Compliant as a faith held by Muslims is the main reference build tourism activities. Shariah Compliant tourism thinks the basic values of Muslims in its introduction, from accommodation, restaurants to tourist activities (Rakhmad & Hidayat, 2021).

## **1.2 BACKGROUND OF THE STUDY**

Geography is a comprehensive scientific discipline involving natural, human factors and their interaction in geographic space. Geographic content involves various factors (such as geology, topography, hydrology, environmental, biology, tourism, climate, economy, science, human sciences and other), their temporal, spatial distribution, evolutionary processes, interaction mechanisms, both internal and external. As the need for an understanding of the "why" and "how" continues to increase beyond the "what" and "where," more and more geographic analysis approaches.

To better understand this complexity, modern geographic research has gradually evolved from the study of individual elements, processes to a comprehensive, integrated

view, now forms a systems science based on collaborative research and interdisciplinary approaches. As a fundamental tool for geographic research, GIS should grow at the same rate as geography develops and changes. In fact, the application shows that the typical uses of GIS in the past are still mainly cartography, spatial data management and spatial analysis. Traditional GIS primarily uses and applies physical geographic views; for example, pipeline management information systems, mineral resource planning and management both information systems and virtual cities have been decentralized. However, because geography includes both a physical, a human part, because human-related data is easier to collect than ever, now is the right time to focus on human-centred GIS and related information presentation strategies (Lü, et al., 2019).

List the importance of geographic information systems (GIS) to the study and analysis of different spatial phenomena, relevant to all sciences and other fields. This is done by using technical equipment to provide preliminary data on the phenomenon. Analyse and convert GIS programs into graphics and other scientific information to accurately map phenomena. It also helps to highlight the properties of these areas. An industry consists of active, sporadic, fragmented industries combined with appropriate planning to develop industry-specific goals and objectives. Therefore, they need various laws that regulate the entire industry (Al Hawamda, et al, 2006).

Shariah Compliant tourism is now a trend as well as necessities in Muslim and non-Muslim countries. Shariah Compliant tourism is a fast-growing segment only in Muslim countries, but globally. With this growth phenomenon, coupled with a growing number of Muslim tourists around the world, some non-Muslims Countries are also starting to implement various strategies to benefit from them Shariah Compliant tourism. For example, in Japan, it has begun to focus on Especially attractive to tourists from Muslim countries visit Japan from Southeast Asian countries. Prayer rooms are available at major airports, and several more restaurants now serve halal food. Shariah Compliant tourism has become a new global trend, this is driven by the increasing number of Muslim tourists, and it continues to increase every year (Adinugraha, et al., 2021).

Tourism Industry consists of activities, fragmented sectors of sporadic integrated with proper planning so that it is of a certain industry specific goal. They