

UNIVERSITI TEKNOLOGI MARA

**HIKING TRAIL WEB BASED ASSISTED BY GIS IN
PERLIS**

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ABSTRACT

A trail is normally a path with a rough beaten or dirt/stone surface used for travel. Trails may be for use only by walkers, but some are also be used for cycling, horse riding, snow shoeing, or cross-country skiing, and less often for moving cattle and other livestock. A trail can also be a marked route on a navigable waterway. In some places, trails are the main access route to remote settlements. In this study, we will be focus on hiking activity that usually happens on trails at hills or mountain areas. Geographical Information System (GIS) technology has a lot of potential applications in trail planning or route. One of significant aspect that GIS assist trail planning is by digitizing the route of the trails using ArcGIS software. The goal of this research is to encourage Perlis State to become an attractive place for recreation especially in hiking. The objectives of the study are to collect the trail information and places using geospatial approach and to develop interactive hiking places web-based at Perlis State, next is to produce contour and DEM map of hiking trails and lastly to acquire user acceptance on the website system implementation. This study also will use waterfall model in developing the website. This web-based generated using open sources like Wix Web Editor. In system testing, analysis can be made of the web-based development by distributing the questionnaire to 50 respondents and analyzing user satisfaction on the GIS tourism web-based development. As result, the study has advantages to people and tourists around Perlis or from other states to use the website created to make their hiking experiences a lot easier and fun.

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CHAPTER ONE

INTRODUCTION

1.1 Overview

A common recreational activity with beneficial effects on health and wellbeing, hiking is a key component of the global tourist industry (UNWTO, 2019; Gross and Sand, 2019). Numerous locations and businesses provide specialized services that include hiking and associated pursuits including walking, long-distance hiking, and mountaineering (Muhar et al., 2007; Mehmetoglu and Normann, 2013). The UNWTO highlighted the advantages of outdoor activities like hiking for improving one's overall well-being in addition to its contribution "to better engage with local citizens, nature, and culture". This is supported by allowing multiple day trips, providing a variety of options, and providing corresponding services along the way, all of which promote sustainable tourism (Raya et al., 2018). Hiking, in opposed to mountaineering, is typically thought of as a gentle adventure sport with fewer risks and physical obstacles for participants. Others choose hiking as a social activity, an immersive natural experience, or a combination of these things. For some, hiking is a pure sporting activity (Pomfret, 2016).

Mountaineering has been profoundly impacted by the advancement of information and communication technologies (Aplar, 2019). With smartphones, individuals may access mountaineering web GIS programs that offer users useful information in addition to being able to know their whereabouts. Spatial data may now be collected, stored, visualized, shared, and updated with ease because to the development of Global Navigation Satellite Systems (GNSS), computers, smart phones, the pervasive Internet, and a variety of other widely available measuring devices (Pai & Poljari, 2018).