

Chapter 23

Tourist Behaviour Analysis Using Data Analytics

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ABSTRACT

There has been a lot of hurry in the tourism business in recent years, and the rise of IT technology has had a major impact on vacationers. In recent years, numerous studies of big data have been devoted to analysing tourists' behaviour. Decision-making support from big data analytics has only been shown in a small number of studies. The proliferation of social media's ability to gather massive amounts of data has opened up new avenues for research and improved insights for policymakers. The purpose of this chapter is to gain a deeper comprehension of the motivations behind visitors' actions, as well as the environmental and social influences that shape their experiences. The digital lifestyle pattern outlines the idea of tourist behaviour, bridges the gap between the tourist and the digital world, and allows us to zero in on how that behaviour evolves over time. Using the idea of a digital lifestyle pattern, we may build strategies for the behaviour of tourists.

DOI: 10.4018/979-8-3693-2193-5.ch023

1. INTRODUCTION

Over the past few decades, tourism has been an increasingly significant contributor to national economies around the world. It's one of the biggest industries, and although having a major impact on the environment, it's creating opportunity for national economies to grow and prosper (Dwyer et al., 2020). The economic impact of tourism on the world in 2019 is estimated at €9.5 trillion, or 10.9% of global GDP and 10.8% of total employment. Tourism in Europe is responsible for €2.7 billion (\$3.3 billion), 7.1% of GDP, and 37.1 million jobs (Global Economic Impact & Trends 2020, 2020). Over the past ten years, the IT sector has began interacting with other sectors of the economy, including the travel sector. Smart tourism is the genius child of the convergence of data technologies and travel (Kontogianni & Alepis, 2020). Smart tourism, as defined by J, is defined as an approach to travel that makes use of modern information and communication technology to modify visitor experiences in order to make them more efficient and sustainable (Wang & Fesenmaier, 2013). (Lee et al., 2020). According to Li et al. (2017), recent years have seen an uptick in research into various statistical monitoring techniques employed by the tourism industry to keep tabs on customer habits. It can be used as a starting point for formulating a plan to boost tourist hotels' service quality and gain an edge in the market through increased efficiency (Regin et al., 2023).

About 2.7 billion foreign tourists visited the world in 2019, as reported by the UNWTO (United Nations World Tourism Organization, 2019). Between 2010 and 2030, the number of people who travel internationally is projected to grow by 3.3% year. Tourist behaviour analysis is a useful tool for establishing rapport with customers. A company's ability to serve its customers well and enhance their perception of the company depends on the quality of the services they provide to those customers, who are its tourists (Rajest et al., 2023a). Travelers can leverage AI-powered services in the tourist industry to automate tasks like promotion, attraction development, building, and enhancement of the trip experience (Li et al., 2017).

Effective tourist destinations are used and analysed based on a variety of factors that help other tourists make better-informed judgments about where to go (Rajest et al., 2023b). The abundance of information resources across a variety of channels presents a problem for this investigation since it forces vacationers to spend a considerable amount of time deliberating and organising their trips (Ocoró et al., 2023). Organizations in the hospitality industry may learn a great deal about how to keep their guests happy by conducting surveys and doing in-depth analyses of their customers' opinions, requirements, preferences, and experiences. In accordance with Reference (Pearce, 2005), the three main types of users that can profit from this analysis are visitors, government agencies, and private companies (Al Shraah et al., 2013). Improved tourist services allow visitors to immediately use behavioural analysis to their own development or that of their businesses (Al Shraah et al., 2022).

Wi-Fi hotspots and other mobile phone app terminals have enabled new technical means of observation thanks to advancements in network and Internet technologies. The vast majority of tourists now use smartphones while on vacation, and this has a tremendous effect on how they choose which sights to see. Cameras, gateways, Wi-Fi base stations, and other monitoring hardware are necessary for the flow monitoring approaches described by Kashevnik et al. (2019). Not all picturesque locations make it simple to set up and use (Priscila et al., 2023). Most smartphone apps (like Instagram) cater to a younger or middle-aged demographic and so cannot keep tabs on all types of travellers (Khaled Lafi Al-Naif and Ata E. M. Al Shraah, 2018). Thus, social networks are frequently utilised as the foundation for visitor behaviour prediction models based on many sources, such as user-generated material (photos/videos/

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