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LIST OF ABBREVIATIONS

BI	Business Intelligence
IoT	Internet of Things
LDA	Latent Dirichlet Allocation
NLP	Natural Language Processing
PMI	Ponitwise Mutual Information
TF-IDF	Term Frequency-Inverse Document Frequency
UGC	User Generated Content

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PREFACE

The embracement of big data and machine learning techniques in tourism industry has been presumed as a mean to direct the challenges and issues of the smart development of tourism destinations and organizations by redesigning the margins of the competition and improving its pattern and design as information intensive business. In the process of their journeys and in their decision-making processes, people who travel contribute to the generation of a huge flow of data created by sensors and micro-devices disbursed on the urban and other areas of interest for travellers. All these information is a potential base for creating smart destinations and also for improving the tourism organizations' potential to customize their products and service offerings. Though, the real execution of such inventive forms of data-driven value generation in tourism continues to be more restricted to the theory or executed in a few excellent cases. Indeed, big data and machine learning techniques in tourism continues to be an unclear concept and a subject of investigation that necessitates closer analysis from an extensive range of field and research methods. Comprehensibly with this viewpoint, the current special issue aimed to deal with development of the discussion on Smart Tourism by concentrating on big data as a promising model which is re-shaping the concept and practice of tourism. In particular, the underlying principle of the study is to explore benefits, importance and challenges of big data in smart tourism with theoretical and experiential contributions and intend to derive meaning for smart tourism. Known the changes that digital era is introducing in the tourism industry and with the intention of supporting managers that function in this industry, it is significant to look into various challenges and issues included on how big data could contribute to decision-making processes in tourism organization. This issue makes an effort to cover these subjects and to consider the status of big data and smart tourism study. The study also intends to analyze the benefits of big data and various machine learning techniques evident for those in the area of tourism and to comprehend the effectiveness of, and opportunities presented within. The tourism sector is a wide business area, but the keystone of this sector is the ambience part of it and hotels are considered the influential in that field. Running a profitable business could be

millstone for every tourism organization and necessitate hotel organizations to hire more staffs in which they have to afford financially and manually. Three different techniques have been used in the current study, i.e. association rule mining, point wise mutual information technique (PMI) and neural network such as multiclass and multilabel classification algorithms. These three classification models have been used in order to check the accuracy of the results, i.e. TF-IDF, Doc2Vec and LDA. In order to generate tourists' profile and information, different big data algorithms and machine learning techniques have been recommended and applied to tourism text data assessment. The study concluded that accuracy is high for the TF-IDF approach. Successful cases are analyzed by elucidating the main opportunities and challenges for the generation of official tourist information. Throughout the growth and interpretation of the knowledge of tourism, every time as a result of the poor understanding of the leader or extreme dependence on big data, there might be a misunderstanding that big data could do anything. It results in blind decision-making, and consequently many technical inputs might not bring in the desired effect. The awareness and understanding of big data for users is considered important. The use of big data is a conventional application in the marketing policy. The study contributes to literature on value generation from big data and it's relating technologies. This paper also contributed to explain the role of big data in transforming the structure of tourism industry, which is dominated by deep-rooted business logics. The study offers original contributions which progress knowledge regarding challenges and importance for smart tourism with respect to big data. It also deals with state-of-the-art technique and related practice, and emerging challenges and issues and areas for future investigations are examined in this study.