An Evaluation of Existing Models to Smart Cities Development Around the World

Authors : Aqsa Mehmood, Muhammad Ali Tahir, Hafiz Syed Hamid Arshad, Salman Atif, Ejaz Hussain, Gavin McArdle, Michela Bertolotto

Abstract : The evolution of smart cities in recent years has been developing dramatically. As urbanization increases, the demand for big data analytics and digital technology-based solutions for cities has also increased. Many cities around the world have now planned to focus on smart cities. To obtain a systematic overview of smart city models, we carried out a bibliometric analysis in the context of seven regions of the world to understand the main dimensions that characterize smart cities. This paper analyses articles published between 2017 and 2021 that were captured from Web of Science and Scopus. Specifically, we investigated publication trends to highlight the research gaps and current developments in smart cities research. Our survey provides helpful insights into the geographical distribution of smart city publications with respect to regions of the world and explores the current key topics relevant to smart cities and the co-occurrences of keywords used in these publications. A systematic literature review and keyword analysis were performed. The results have focused on identifying future directions in smart city development, including smart citizens, ISO standards, Open Geospatial Consortium and the sustainability factor of smart cities. This article will assist researchers and urban planners in understanding the latest trends in research and highlight the aspects which need further attention.