

Critically Analyzing the Application of Big Data for Smart Transportation: A Case Study of Mumbai

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Abstract : Smart transportation is fast emerging as a solution to modern cities' approach mobility issues, delayed emergency response rate and high congestion on streets. Present day scenario with Google Maps, Waze, Yelp etc. demonstrates how information and communications technologies controls the intelligent transportation system. This intangible and invisible infrastructure is largely guided by the big data analytics. On the other side, the exponential increase in Indian urban population has intensified the demand for better services and infrastructure to satisfy the transportation needs of its citizens. No doubt, India's huge internet usage is looked as an important resource to guide to achieve this. However, with a projected number of over 40 billion objects connected to the Internet by 2025, the need for systems to handle massive volume of data (big data) also arises. This research paper attempts to identify the ways of exploiting the big data variables which will aid commuters on Indian tracks. This study explores real life inputs by conducting survey and interviews to identify which gaps need to be targeted to better satisfy the customers. Several experts at Mumbai Metropolitan Region Development Authority (MMRDA), Mumbai Metro and Brihanmumbai Electric Supply and Transport (BEST) were interviewed regarding the Information Technology (IT) systems currently in use. The interviews give relevant insights and requirements into the workings of public transportation systems whereas the survey investigates the macro situation.

Keywords : smart transportation, mobility issue, Mumbai transportation, big data, data analysis

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