

Geographical Information System in Transportation (GIS-T) and Big Data Analysis, an Overview, Benefits and Challenges of Increasing Number of Private Taxi Services.

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SUMMARY

It is significant to take advantage of the uprising of location-based (spatial) data capturing methods and the collection of big data for useful applications. In Ghana, Africa the past few years have seen the insurgent of small private cars as a transportation mode. The services even though has gone a long way to augment the existing transportation mode system, its application area in terms of Geographical information system has been underutilized. This study attempts to outline the prospective of GIS in transportation (GIS-T) as a spatial tool for improving and utilizing the benefits of data collected from private taxi services. The data collected from the movement of vehicles carrying people have a spatial component that can be useful. The data collected using this pick-up system can be used to solve huge transportation issues, including collecting data for traffic flow analysis, maintenance of roads, real-time map sharing service, investigations into canceled trips which is a step towards making the city smarter. Data can also be used in determining driving times and advice commuters on traffic conditions at various times of the day and many other application areas can be explored. The conclusions offer recommendations regarding future advances in GIS-T for vehicular movement patterns of other modes of transportation.

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