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Safari Njema Project: a multidisciplinary analysis of paratransit mobility in Sub-Saharan countries from GPS data

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Safari Njema Project is an interdisciplinary research project aimed at understanding and optimizing paratransit mobility system in Maputo (Mozambique), by analyzing mobile phone GPS data. In this talk, we give an introduction about the project and the context, describing what is paratransit mobility and how GPS data can help understanding the complex mobility system in sub-saharian urban areas. We discuss adbout possible manipulation of GPS traces in terms of data object, from origin destination matrices to trajectories. For each different data type, we present analysis and results such as the statistical analysis of origin destination matrices between different areas, transport mode detection from users' trajectory, and the relationship between the users'trajectories and the trajectories of different paratransit mobility lines. The analysis provide an overview about the paratransit potential demand and compare it with the actual offer, starting a data-driven optimization procedure. To conclude, we will discuss the scalability of the framework with a brief discussion of the same data type and analysis in the context of Lombardy Region in north of Italy.

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