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## Use of digitisation for “smart” travel data collection

### ABSTRACT

Travel surveys and other traditional methods have been used for collecting mobility data since 1930s. Those surveys have been so far the most reliable approaches to understand people mobility patterns, but their high costs do not allow a high frequency collection to obtain continuously updated data. To overcome these limitations, digitalization opens the gate for renewed travel data collection and analysis methods. To this extent, the aim of the study is to present a review of the various smartphone applications, classifying them according to three different purposes: 1) Travel Data Collection and Analysis; 2) Travel Surveys; and 3) Promotion of Sustainable Mobility. 81 apps were retrieved and analysed in detail and evaluated according to their features and the methods used for data collection. A subsequent SWOT analysis has then been performed to understand the strengths, weaknesses, opportunities and threats of using the smartphone applications to understand mobility patterns. Finally, recommendations for future research are put forward.

### BIOGRAPHY

Pinky Kumawat is a PhD student in Transport Research for Innovation and Sustainability (TRIS) research group in the Interuniversity Department of Regional and Urban Studies and Planning (DIST) at Politecnico di Torino, Italy. Her doctoral research is about the use of data mining, machine learning, and statistical analytical techniques to understand the travel behaviour and mobility patterns of users by collecting and analysing travel data from various available data sources under the supervision of Prof. Cristina Pronello.

She holds a master's degree in Computer Science and Engineering (CSE) from Rajasthan Technical University, Kota, presenting a thesis entitled “Predicting ERP User Satisfaction by Using Hybrid of ANFIS and KNN Classification Approach” and bachelor's degree in Computer Science and Engineering (CSE) from Govt. Women Engineering College Ajmer, Rajasthan, India.