Inferring Human Mobility in India Using Machine Learning

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Abstract : Inferring rural-urban migration trends can help design effective policies that promote better urban planning and rural development. In this paper, we describe how machine learning algorithms can be applied to predict internal migration decisions of people. We consider data collected from household surveys in Tamil Nadu to train our model. To measure the performance of the model, we use data on past migration from National Sample Survey Organisation of India. The factors for training the model include socioeconomic characteristic of each individual like age, gender, place of residence, outstanding loans, strength of the household, etc. and his past migration history. We perform a comparative analysis of the performance of a number of machine learning algorithm to determine their prediction accuracy. Our results show that machine learning algorithms provide a stronger prediction accuracy as compared to statistical models. Our goal through this research is to propose the use of data science techniques in understanding human decisions and behaviour in developing countries.
Keywords : development, migration, internal migration, machine learning, prediction
Conference Title : ICCACMG 2018 : International Conference on Cultural Anthropology, Culture, Migration and Globalization
Conference Location : Tokyo, Japan
Conference Dates : April 05-06, 2018