Designing Smart Cities Models Using Machine Learning Methods in India

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Abstract: *Discovering important patterns in data can help cities to plan, monitor, and assign resources more efficiently, converting them in smart cities with more organized communities. Machine learning models can take advantage of this large amount of data to improve and scale these cities' duties. In this work, we explore machine learning approaches to solve different problems in the smart cities domain related to water consumption, energy consumption and emergency events. More specifically, our work sheds light on the design of ensemble learning, sequential models and the combination of probabilistic graphical and deep learning models to this type of problems. Moreover, we carefully compare, adapt and implement methods to address the particular characteristics of the data and the problems of smart cities.*
We are going to focus on four specific problems:
1. Classifying the water pump operation status, quality and quantity,
2. Predicting the future water consumption based on historical consumption,
3. Time resolution prediction for emergency events and
4. Dis-aggregating energy signals into their component appliances.

Keywords: Smart Cities, Machine Learning, Artificial Intelligence, Models of smart city, ML Applications, etc

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