AN ADAPTIVE FRAMEWORK TO IMPROVE THE QUALITY OF TEMPORAL WEATHER DATA

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Abstract

Weather forecasting is a vital component that has a tremendous impact on a modern-day human's day-to-day life. The modern-day human relies on the forecasted weather data to plan their tasks. Therefore, the effectiveness and the reliability of weather forecasting is crucial. The modern data driven world utilizes temporal weather datasets and forecasting models for the weather forecasting process. The reliability and the accuracy of the data generated by the forecasting models has a direct dependency on the quality of the dataset fed into the model. The inclusion of noise in a temporal dataset can cause the forecast model to become over complicated and inaccurate. Hence, there is a need for a reliable and an effective mechanism to improve the quality of temporal weather datasets.

In this research project, the author focuses on proposing a reliable and a simple mechanism that can cleanse a temporal weather dataset ultimately enhancing its weather forecasting performance. The proposed solution is composed with a series of data processing techniques. The performance and the effectiveness of the implemented system was thoroughly tested via a series of test criteria.

Keywords: Weather forecasting, Temporal Datasets, Data Pre-Processing, Data Analysis, Dataset Cleansing