SYNTHETIC TIME SERIES DATA IN RESTAURANTS' SUPPLY CHAIN PLANNING

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Abstract. *Almost 50% and over 1 billion tonnes of food is wasted annually worldwide [1]. Restaurant industry with 290 million tonnes is a major contributor to the food wastage. Promising machine learning (ML) models have been developed to optimize the raw material usage in restaurants but obtaining data for training these models is quite a difficult task because data is considered sensitive for intellectual-property and fiscal reasons. Recently large language models (LLMs) have shown promising results on generating synthetic data task [2, 3]. In this paper we use a LLM to generate synthetic data for restaurant dish sales and product supply and investigate how this data can be used to train different ML models. We conduct a comprehensive study and analysis on the performance of these models with our data.*

Key words: Synthetic data, time series, LLMs, restaurants, supply chain.

Acknowledgments

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