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### Patent Search

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#### Abstract:

The present invention introduces an innovative system and method for revolutionizing the analysis of restaurant reviews. By seamlessly integrating advanced text processing techniques with Multicriteria Decision Making (MCDM) methodologies, this invention enables a holistic approach to restaurant review analysis. Unlike traditional sentiment analysis methods that rely on labeled data, the invention leverages unsupervised learning, reducing the need for extensive data labeling and making it applicable to a wide range of languages and restaurant environments. Through the combination of textual and visual sentiment analysis, the system generates comprehensive sentiment for each restaurant review, empowering both consumers and restaurant proprietors with deeper insights into customer experiences and preferences. This invention represents a significant advancement in enhancing the quality of restaurant services and decision-making processes within the food industry.

#### Complete Specification

**Description:**The present invention relates to the field of natural language processing, computer vision, and data analytics. More specifically, it pertains to the automatic analysis of restaurant reviews, encompassing the extraction of sentiment information from textual content and the processing of visual content associated with restaurant reviews. The invention utilizes Multicriteria Decision Making (MCDM) techniques to combine these data sources, enabling unsupervised sentiment analysis that provides valuable insights into customer opinions and satisfaction with respect to dining experiences at various restaurants.

#### BACKGROUND OF THE INVENTION

The following description of related art is intended to provide background information pertaining to the field of the disclosure. This section may include certain aspects of the art that may be related to various features of the present disclosure. However, it should be appreciated that this section is to be used only to enhance the understanding of the reader with respect to the present disclosure, and not as admissions of prior art.

In today's digital age, online platforms and social media have become primary sources for consumers to express their opinions and experiences, particularly in the context of restaurant dining. Restaurant reviews, posted on websites, mobile applications, and social media platforms, have become valuable resources for prospective diners seeking information and insights into the quality of dining establishments. These reviews often encompass a wide range of factors, including the quality of food, service, ambiance, and overall customer experience.

While the abundance of restaurant reviews provides a wealth of information, their sheer volume and unstructured nature present significant challenges for both

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