Natural Language Processing Tools for Performing Effective Text Mining Tasks in Greek Food & Beverage Sector - Abstract

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Summary

Nowadays, more and more companies use the social media networking to attract more customers. This modifies consumers' attitudes and companies, or other stakeholders cannot detect these modifications due to the big volume and the diversity of the produced information. In the case of the Food and Beverage (F&B) sector, which is one of the most dynamic sectors in Greece, the use of social media networks is very high for multinational and large companies. Delivery or take away food or coffee is very common, with the vast majority of consumers to order from aggregators' platforms (online digital markets). Thus, a large amount of data containing useful information concerning the consumers' preferences is generated from these online digital markets. The produced data (evaluations) which is generated rapidly can be large and cannot be mined and analyzed in real-time due to the lack of resources. Greek and many other European languages, show a low density of linguistic resources and knowledge bases, making it difficult to perform text mining and natural language processing tasks. The situation is getting even more difficult by the fact that Greek is a high-dimensional language with a lot of complex grammatical and syntax rules. The purpose of this research is to propose some Natural Language Processing tools for performing effective text mining tasks in the Greek Language helping the stakeholders in extracting, analyzing, and inferring meaningful information. The tools are tested in a dataset that contains 80,500 customers' reviews written in Greek Language and the findings will be practical and significant, as not enough attention has been paid to Natural Language Processing techniques and tools used in combination with non-English, like the modern Greek language.

Keywords

Analytics and Data Science, Social Networks, Natural Language Processing, Computational Linguistics, Sentiment Analysis, Food & Beverage Sector, Greek Language