Text Mining and Sentiment Analysis

Text mining is an artificial intelligence technology that can transform unstructured data to structured data using natural language processing. The data is then ready to be analyzed or used in machine learning algorithms. Sentiment analysis is a useful form of research to use on this data, which can derive the sentiment of text within the data using natural language processing, text analysis, and other tools. Sentiment analysis’s basic function is classifying the expressed opinion of text into being positive, negative, or neutral. This analysis can be used for various data, for example in business, “Sentiment analysis from text is currently widely used for customer satisfaction assessment and brand perception analysis, among others” (Soleymani et al., 2017).

Text mining and sentiment analysis relates directly to topics covered in Temple University’s MIS2502 course. Within the course we discuss structured and unstructured data, also various forms of analysis that can be performed on data in order to derive information that is important to the user. It can be difficult to derive useful information from unstructured data. To combat this problem, we can use text mining and sentiment analysis to draw information from unstructured text data.

There are various applications of text mining and sentiment analysis. An example of a company using sentiment analysis would be the company searches a social media website for all posts including their name, they can then use text mining to structure the data, from there they can perform sentiment analysis on the data to understand the general sentiment/opinion toward the company or its products. Another example of use would be that a company can take unstructured data of reviews of their products, use text mining to structure the data, and then use sentiment analysis to see the general opinion toward the product or even go deeper and derive the sentiment of each sentence in the review to see opinions towards specific parts of the product.

References

Soleymani, M., Garcia, D., Jou, B., Schuller, B., Chang, S.-F., & Pantic, M. (2017). A survey of multimodal sentiment analysis. *Image and Vision Computing*, *65*, 3–14. https://doi.org/10.1016/j.imavis.2017.08.003