RESEARCH STAY WEEK 10, Supervised sentiment analysis and affective computing

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CONTEXT

Affective computing was ridiculed for most of the history of computer science and engineering in general. It was seemed as either an unsolvable task or a not relevant one. It wasn't until the last couple decades that the topic was taken seriously and its study was deepend worth it and valuable.

There are an uncountable number of tasks related with emotions, but we will be focusing on sentiment analysis.

SEARCH METHODOLOGY

Most of the state of the art and most famous techniques for sentiment analysis come from supervised learning. I wanted to see if there are any unsupervised techniques and how they managed to achieve it.

Findings

When i started looking i had no idea of what i would find. As it turns out, the state of the art for unsupervised learning in sentiment analysis comes from a game theory and multiagent approach. I do not fully understand the inner workings of these models but [1] originally proposed such approach and found comparable and in some cases better performance when compared with fine tuned BERT models (supervised). [2] later improved on this by proposing a population game model approach.

BIBLIOGRAFÍA

[1] Punetha, N., & Jain, G. (2023). Bayesian game model based unsupervised sentiment analysis of product reviews. Expert Systems with Applications, 214, 119128. https://doi.org/https://doi.org/10.1016/j.eswa.2022.119128

[2] Punetha, N., & Jain, G. (2024). Advancing sentiment classification through a population game model approach [Article]. Scientific Reports, 14(1). https://doi.org/10.1038/s41598-024-70766-z