

Analyzing Game Reviews

Description:

Uncovering topics from texts has become an important task for many applications. Topic modelling provides methods to organize large collections of textual information. It can be seen as the unsupervised version of text classification. In order to accomplish this task, conventional models implicitly capture document-level word co-occurrence patterns to reveal topics [1].

Sentiment analysis is the computational study of people's appraisals and emotions toward entities, events and their attributes. The goal is to determine whether an opinionated document (e.g. reviews) or sentence expresses a positive or negative opinion. Opinions are important because whenever someone wants to make a decision, he would like to hear other's opinions [2].

Metacritic¹ is website aggregating reviews in order to create a global score. Additionally, it allows to compare various critics from professional medium to users. The different categories are movies, TV series, music and video games. In this work, we are interested in the latter. An example could be recent games such as God of War² with critic reviews³ and user reviews⁴.

The idea of this project would be first to collect data about various video games in an automated way. This includes: 1) Critic reviews with the parsing of external websites 2) users reviews. In both cases, we would like to collect texts from various languages as well as scores and publisher/user information. As a second step, we will do some exploratory data analysis of English reviews by using sentiments, topic modeling but also document [3] and sentences embeddings [4]. Finally, we would to experiment different methods for aggregating these reviews.

Prerequisites: Knowledge about Machine Learning & efficient with Python

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References:

- [1] <http://proceedings.mlr.press/v15/wang11a/wang11a.pdf>
- [2] <https://www.cs.uic.edu/~liub/FBS/IEEE-Intell-Sentiment-Analysis.pdf>
- [3] <https://arxiv.org/pdf/1405.4053.pdf>
- [4] <https://arxiv.org/pdf/1803.11175.pdf>

¹ <http://www.metacritic.com/music/hell-on/neko-case>

² <http://www.metacritic.com/game/playstation-4/god-of-war>

³ <http://www.metacritic.com/game/playstation-4/god-of-war/critic-reviews>

⁴ <http://www.metacritic.com/game/playstation-4/god-of-war/user-reviews>