Summarizing Game Reviews

Description:

Nowadays, information from the Web is overwhelming us from all sides and creates a need for automated multi- document summarization systems that produce high quality summaries. Extractive multi-document summarization, where the final summary is composed of sentences in the input documents, has been addressed by a large range of approaches. Generally, summarization systems output summaries in two steps: sentence ranking followed by sentence selection. The first estimates an importance score of each sentence and the second chooses which ones to select by considering 1) their importance and 2) their redundancy among other sentences and the current summary. Most of the time, all sentences in the same collection of documents are processed independently and therefore, their relationships are lost.

Metacritic[1] 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 War[2] with critic reviews[3] and user reviews[4].

The idea of this project would be to summarize professional game reviews using extractive summarization. Depending on the results and the feasibility, it is possible to consider also abstractive summarization, where sentences are generated and not copied. We could also imagine integrating user reviews to improve the models.

So far, only [1] (from Google) did a similar work based on a huge dataset obtained from Wikipedia without any specific domain. Our challenge is to obtain good results for a smaller data but oriented to video-games. Therefore, we could compensate somehow the size of the dataset with the domain.

Prerequisites: Knowledge about Machine Learning & efficient with Python

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References:

[1] https://arxiv.org/pdf/1801.10198.pdf

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[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