ABSTRACTIVE MOVIE REVIEW SUMMARIZATION USING DEEP LEARNING (CineReSum)

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Abstract

The Abstractive Movie Review Summarization system aims to provide a condensed and comprehensive overview of movie reviews written by both critics and general users. The system employs advanced deep learning techniques to classify the reviews into different aspects and generate an abstractive summary for each aspect. The proposed solution novelty in this research is the application of deep learning models to generate abstractive movie review summaries, which differs from previous studies that have mostly focused on extractive summarization techniques.

Advanced deep learning techniques, including Transformers and transfer learning, to detect reviews into different aspects such as plot, acting, cinematography, etc., and generate an abstractive summary with aspect. We experimented with different hyperparameters such as number of layers, number of heads, learning rate, etc., to achieve high accuracy in summarization.

Test Results: We evaluated our model using data science metrics called ROUGE score variations and achieved better accuracy in classifying reviews into different aspects and generating coherent and meaningful summaries. The proposed solution has potential applications beyond movie reviews such as news articles, product reviews, social media posts. Additionally, Human evaluation also has been conducted to validated the generated summaries.

Subject Descriptors: Natural Language Processing, Summarization of Movie Reviews

Keywords: Abstractive Summarization, Movie Reviews Summarization, Deep Learning