

Exploring MOOCs With Sentiment Analysis and Dropouts: What Does It Tell Us?

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Abstract

Online education has taken a huge surge in recent years due to the flexibility and accessibility it offers in terms of learning. Massive Open Online Courses are free courses offered by various websites which are open for everyone to enrol. The structure of the course has platforms on which students can discuss, practice and learn. Even though these courses are very popular, the high attrition rate has always been a concern for the MOOC owners. In order to scrutinize these dropout rates, it is important to perceive the students' attitude towards the course and these opinions can be extracted with the help of sentiment analysis.

The main objective of this dissertation is to explore the relationship between the attrition rate of the MOOC and student sentiments obtained through the comments. In addition to the dropouts rate, the mutual association of step completion rate with the student sentiments was studied. Furthermore, the data was divided according to their step content type, and then the same analysis was repeated to study the differences between the trends in different step types.

There are several methods to choose from to implement sentiment analysis and for this thesis, the NLTK module in python together with SentiWordNet corpus was found to be the best suited for the available data. The correlation was explored with the help of pandas profiling module in python and it was found that there is no relationship between the student sentiments and dropouts rate for the data considered for this analysis. Apart from video steps, it was identified that the step completion ratio also does not have any relation with student sentiments. This thesis also tries to discover the reasons behind the outcomes. Finally, the thesis concludes with a few limitations of this process along with directions for future research.