

Using Sentiment Analysis to assess Student Ratings

1. Team Members:

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2. Goals and Objectives:

a. Motivation

Sentiment Analysis is known as the process of finding positive and negative opinions, also known as sentiment, in a text. Our motivation is to use sentiment analysis to detect sentiment in the ratings of professors by students. There is a website called Rate My Professor, the best source for professor ratings based on the feedback from students. We will be using sentiment analysis to detect the opinions of students from the Rate My Professor website.

b. Significance

As earlier stated in the motivation, Rate My Professor is a website where students give feedback on their professors through ratings and comments. It is possible that a comment made might need more analysis to fully understand the reason for the rate given by the student, and this is where the importance of sentiment analysis comes in. Using sentiment analysis to monitor the comments and assess the language or words used by the student will give more reasoning behind the rate.

c. Objectives

- i. Create customized NLTK's sentiment analysis to use the most useful features
- ii. Run model with different classifiers such as KNN and Regression to compare the models for best results
- iii. Create landing page to show average emotional score for UNT
- iv. Create search by UNT professor name and page displaying average emotional score for professor

d. Features

- i. User can see the average emotional rating of UNT
- ii. The user can search for a specific UNT professor to see his/her average emotional rating if that professor has comments and ratings within RateMyProfessors.com

3. Reference:

- Python API for searching Rate My Professor data from a single university:
<https://github.com/tisuela/ratemyprof-api>
- A tutorial for Sentiment Analysis: First Steps With Python's NLTK Library:
<https://realpython.com/python-nltk-sentiment-analysis/#compiling-data>

- A tutorial for a basic sentiment analysis:
<https://towardsdatascience.com/basic-binary-sentiment-analysis-using-nltk-c94ba17ae386>
- Emotion and Sentiment Analysis: A Practitioner's Guide to NLP:
<https://www.kdnuggets.com/2018/08/emotion-sentiment-analysis-practitioners-guide-nlp-5.html>