Rate My Professors Sentiment

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Abstract— In this project, we want to analyze reviews from the RateMyProfessors site for professors at UT. RateMyProfessors search results indicate there are over 3700 professors from UT that have reviews. We will gather all reviews and analyze them with word analysis and gather keywords. We would like to also separate reviews based on each major and each department to see how different students feel.

I. OBJECTIVE

Our objective is to extract students' opinions of University of Tennessee professors using sentiment analysis of their professor reviews on the website RateMyProfessors. We will break this information down by department to determine if any department has a higher satisfaction or dissatisfaction rate than the others.

II. MOTIVATION

RateMyProfessors can be a valuable tool when selecting classes. It's useful for determining which professors fit your personal learning style. Although we recognize that bias will be present in the data, it can still provide a representative sample of students' sentiment regarding their college. The bias primarily results from the nature of a review site. Reviews can be polarized because students with neutral experiences rarely write reviews. Only the students who have strongly positive or negative experiences go on the site to review them, resulting in stronger opinions than those that are held by the general student body. Even so, the general results can provide an indication of student satisfaction in their departments.

For instance, student feedback is critical to the University's success in its journey to rank in the top 25 among the United States' public universities. The University garners this feedback in a variety of ways, but a primary obstacle is student unresponsiveness to surveys. Our RateMyProfessors sentiment analysis report can provide a partial solution to the University's lack of student feedback by making previously obscure information easily accessible. RateMyProfessors has thousands of students' reviews on their classes and instructors, making it a prime candidate for the University to receive candid and extensive student feedback. If our school wants to succeed in its journey to the top 25, acting on assessments from previously-ignored sources could be key.

On another front, our sentiment analysis report can be a practical and relatable tool for prospective students investigating our University. Hundreds of potential students in the incoming freshman class are undecided on their field of study. Being able to see fellow students' opinions on different departments and colleges within the University will help prospective students determine where they will be most successful and satisfied. This can significantly ease the difficult decision regarding field of study for numerous students.

Professors can also potentially benefit from seeing how well their department is doing. Professors will be more motivated to make a positive and impactful experience on students in their classes. Professors can try to adjust their course or teaching style based on any constructive criticism they may receive. This would greatly improve classes for professors and students if everyone is happy.

III. WHAT DATA WE WILL OBTAIN

We will obtain review data from the site using a website scraper. There are over 3700 professors for which we can get reviews. The site itself also allows us to filter by department, so we can use this option to help us segment our data by department, thus analyzing and comparing the average numerical reviews for the professors in each college at The University of Tennessee. We can also compare reviews of professors within a department, or reviews of professors across departments with similar functions. (For instance, comparing professors of first year classes in different departments with each other and possibly looking for a correlation between the numerical reviews for a department and the drop rate from that same department.) Using the scraper, we will gather the numerical rating, review tags, professor, course, department, and the review body itself.

IV. RESPONSIBILITIES

- Rachel Harris
  - Work with other members to write website scraper
  - Construct tables and graphs
  - Data Analysis
  - Progress Reports
  - Final report
- Shivam Patel
  - Project startup
  - Work with other members to write website scraper
  - Organize data by department
  - Testing
  - Final report
- Madeline Phillips
  - Work with other members to write website scraper
  - Data Analysis
  - Sentiment Analysis
  - Write rough draft of final report
  - Final report

V. TIMELINE

- October 1: Begin writing website scraper
- October 1-31: Ongoing testing of website scraper
- October 31: Run complete website scraper on Rate-MyProfessors.com to gather data
- November 1: Begin writing and performing data analysis
- November 1-14: Ongoing data analysis testing
- November 14: Construct table and graphs to represent data
- November 21: Begin drawing conclusions from results
- November 24: Write rough draft of final report
- December TBD: Turn in final report

VI. EXPECTED OUTCOME

After completing our analysis, we expect to be able to present an artifact that illustrates students' perspectives on professors at the University of Tennessee. The reader will be able to see the qualitative and quantitative differences between departments and have a more comprehensive understanding of student satisfaction by general field of study. This information could potentially inform prospective students as they decide their major, as well as provide feedback for the university and professors on where it has been successful and where it can improve.

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