

Assignment 1

Introduction to NLP (CT5120/CT5146)

OVERVIEW & PURPOSE

This assignment aims to familiarise students with opinion mining and do a short literature review on this topic. Based on your understanding of the lecture material and your reading of the research papers.

INSTRUCTIONS

1. Answer all the questions and upload your submission as a PDF file on Canvas with the filename "StudentID_Lastname.pdf" before 23:59 on October 30, 2023.
2. All questions carry equal marks and the assignment is worth 25% of the final grade.
3. This is an individual assignment, you must refrain from working with other students to complete this assessment.
4. Please limit your answers to 60-100 words.
5. Please include suitable citations to support your answers.

MARKING SCHEME

1. All questions are marked equally
2. The assignment makes up 25% of the final grade

REFERENCE MATERIALS

1. [Liu, B., 2010. Sentiment analysis and subjectivity. *Handbook of natural language processing*, 2\(2010\), pp.627-666.](#)

QUESTIONS

1. Define the following with suitable examples:
 - a. Opinion
 - b. Direct Opinion
 - c. Comparative Opinion
 - d. Implicit And Explicit Opinion
 - e. Opinion words and phrases
2. Discuss the task of subjectivity classification with examples.
3. What are the different levels of sentiment classification? Explain with suitable examples.
4. Discuss the existing techniques for document-level sentiment classification.
5. Discuss the shortcomings of document-level sentiment analysis and sentence-level sentiment classification.
6. Explain with examples how and where the linguistic concepts of
 - i. Part of speech tagging and
 - ii. syntactic dependency parsingare used in document-level sentiment classification.
7. What is pointwise mutual information (PMI)? Explain how it is used for opinion classification with a method based on Unsupervised learning.
8. Discuss three applications of sentiment classification.