

Institute of Business Administration
Introduction to Text Analytics
Assignment 01
Due Date: 02nd February 2025 (11:55 PM)

Note: This is an individual assignment; hence, everyone must submit it separately.

This assignment aims to explore the capabilities and limitations of different Large Language Models (LLMs) in handling real-world, complex language tasks, while also developing critical assessment skills in the field of Natural Language Processing (NLP). You will evaluate the performance of three LLMs of varying sizes on the following NLP tasks using a provided student complaint email. The models to be evaluated are:

- (a) One model with approximately 3 billion parameters
- (b) One model with approximately 7 billion parameters
- (c) One model with approximately 13 billion parameters

Tasks to Perform:

- Summarization: Summarize the email concisely.
- Question Answering: Answer “What was the reason for the student's disappointment with Professor X?” based on the email content.
- Keyword Extraction: Identify key details such as incidents, concerns, and requested actions.
- Translation: Translate the email from English to French and back to English to assess translation quality.

Sample Student Email:

Subject: Concerns About Professor X's Conduct

Dear Dr. Ustaad,

I hope this email finds you well. I am writing to express my concerns about Professor X's conduct during the Introduction to Zoology class last semester. On multiple occasions, Professor X made dismissive remarks about students' questions and failed to provide clear feedback on assignments.

Additionally, the grading seemed inconsistent and unfair, with no opportunity for clarification or appeal.

I found this experience deeply frustrating and demotivating, and I believe it affected my performance in the course. I would appreciate it if the department could look into this matter and ensure that future students have a more positive and supportive learning environment.

Thank you for your attention to this matter.

Sincerely,

Shaagird

What to submit

- 1- Python code notebooks that you used for experimentation.
- 2- Filled version of the attached document “Assessment.docx”.