GL BAJAJ
Institute of Management & Research, PGDM Institute
Greater Noida

FIND YOUR SPARK

Plot No. 2, Knowledge Park-III, Greater Noida (U.P.) –201306
POST GRADUATE DIPLOMA IN MANAGEMENT (2025-26)
END TERM EXAMINATION (TERM -V)

Subject Name: Text and Sentiment Analytics	Time: **90 mins**
Sub. Code: PGIT 52	Max Marks: **40**

INSTRUCTIONS

1. **All questions are to be solved using Orange on individual Computers/LAPTOPS.**
   o **Start with New workflow : Enter Subject Name, Date, Course & Session (PGDM 2024-26), SEMESTER, Student's Name, ROLL NUMBER on top eg. # Subject Name, # Date and so on**
   o **Export all processes as .ows files in one folder. Folder must be named with your full name and Roll Number for example (Name_GM-----) . submit the soft copies to the invigilator using a PD.**
   o **Conceptual questions must be answered by adding Text Annotation, from bottom left, within the workflow in .ows file.**
2. **During examination, no student is allowed to use mobile phones/Smart watch/Internet in any condition.**
3. **Data sheets (.csv file/Excel) will be provided as a soft copy on the Desktops/Laptops**

Attempt all Four Questions. **40 marks**

CO-1	Identify the business needs for knowledge discovery in order to create competitive advantages with data mining technologies appropriately in order to realize their real business value in solving business problems. (L3)
CO-2	Utilize the basic data mining concepts and their application in business context using data mining tools.(L3)
CO-3	Evaluate interesting and useful patterns from the explosive Volume of data by application of supervised and unsupervised techniques. (L3, L4, L5)
CO-4	Examine Integration of theory and application in various functional areas through interdisciplinary approach. (L4)

Question 1 **10 marks**

Case scenario

Given **Dataset Customer Reviews.** An e-commerce company wants to analyze customer reviews to identify overall sentiment and detect aspects (delivery, product quality).

Questions:

1. Perform sentiment classification (positive, negative, neutral, mixed)
2. Apply word cloud visualization to identify 10 most frequent terms.

Question 2 **10 marks**

Case Scenario

Given Dataset **Social Media.** A brand wants to monitor Twitter posts about a new product launch.

Questions:

1. Preprocess text (tokenization, stopword removal, lemmatization) and write the process using Text annotation
2. Train a sentiment classifier (Naïve Bayes or Logistic Regression).
3. Visualize classification accuracy using Confusion Matrix

Question 3   **10 marks**

Case Scenario

Given **Dataset Customer support email**, A bank wants to detect urgency in customer emails.

Questions:

1. Apply sentiment analysis to detect frustration/urgency. Write your interpretation using Text Annotation.

2. Use keyword extraction to identify urgent requests.

3. Remove 'Neutral' word from the word cloud and reproduce the word cloud

Question 4   **10 marks**

Case Scenario

Given Dataset **Movie Reviews**. A streaming platform wants to analyze movie reviews to understand audience perception.

Questions:

1. Perform aspect-based sentiment analysis (acting, storyline, music).

2. Visualize sentiment distribution

3. Carry out document embedding

4. Cluster reviews into positive vs. negative groups.

Dataset 1   **Dataset 2**   **Dataset 3**   **Dataset 4**

Customer   Social Media.xlsx   Movie Reviews.xlsx   Customer support
Reviews.xlsx   Emails.xlsx

Note: All Questions are mapped to all course outcomes i.e. CO1, CO2, CO3, CO4