**Data Science & Analytics Task 3**

**College Event Feedback Analysis – Internship Project**

**Introduction**

Student feedback is essential for evaluating the effectiveness of academic programs and supporting services. Internships provide students with practical exposure, and gathering structured feedback helps institutions assess how well they’ve prepared students. However, feedback is often underutilized or poorly analyzed. This project aims to perform sentiment analysis on student internship feedback to uncover insights and recommend improvements that enhance the academic and internship experience.

**Dataset Description**

The dataset was sourced from Kaggle and saved as a CSV file named student\_feedback.csv. It contains 9 columns and 1001 rows. The columns include:

Student\_id

Well versed with the subject

Explains concepts in an understandable way

Use of Presentation

Degree of difficulty of assignments

Solved doubts willingly

Structuring of the course

Provides support for students going above and beyond

Course recommendation based on relevance

The data was initially inspected using Excel to check for missing values, duplicates, and structural issues. In Python, I used pandas to load and explore the data:

df = pd.read\_csv('student\_feedback.csv')

print(df.head())

print(df.info())  
 I then renamed the long column names for clarity using the rename() function in pandas.

Sentiment Labeling

Each feedback item was rated numerically. I created a custom function to classify ratings into sentiment categories:

def label\_sentiment(rating):

if rating >= 4:

     return 'Positive'

elif rating == 3:

     return 'Neutral'

else:

     return 'Negative'

This function was applied across eight key feedback columns, creating new sentiment label columns like Clarity\_Sentiment, Doubt\_Resolution\_Sentiment, etc.

for col in rating\_columns:

df[col + '\_Sentiment'] = df[col].apply(label\_sentiment)

Visualization

Using matplotlib and pandas, I visualized the sentiment distribution for each category. Here’s an example using a pie chart:

sentiment\_counts = df['Course\_Relevance\_Sentiment'].value\_counts().reindex(['Positive', 'Neutral', 'Negative'])

plt.figure(figsize=(6, 6))

plt.pie(

sentiment\_counts,

labels=sentiment\_counts.index,

autopct='%1.1f%%',

startangle=90,

colors=['green', 'orange', 'red']

)

plt.title('Sentiment Distribution for Course Relevance')

plt.axis('equal')

plt.show()

Similar charts were generated for all sentiment columns using either pie or bar charts.

A chart with different colored bars

Description generated with high confidenceA pie chart with a red green and yellow circle

Description generated with high confidence

A graph with different colored rectangles

Description generated with high confidenceA pie chart with different colored circles

Description generated with high confidenceA green and orange rectangles

Description generated with high confidenceA pie chart with different colored circles

Description generated with high confidence

A green and orange bar graph

Description generated with high confidence

**Analysis & Interpretation**

Doubt Resolution: Most ratings were positive, indicating that students felt their questions were addressed. However, the small gap between neutral and negative responses suggests room for improvement in this area.

Clarity: Majority rated this positively, which reflects good communication. However, lingering doubts may indicate foundational issues from earlier instruction before the internship.

Student Support: Received strong positive feedback, showing effective support during internships.

Course Relevance: High positive sentiment indicates that the course content aligns well with real-world internship tasks.

Use of Presentations: Although no negative ratings were given, many responses were neutral, suggesting the potential to enhance the impact of visual aids.

Course Structure: Positive ratings were dominant, but neutral and negative counts indicate inconsistent structuring across courses.

Subject Knowledge: Most students were confident in their understanding, but applying that knowledge during internships was still a challenge for some.

**Conclusion**

The analysis shows that while students generally had a positive internship experience, certain areas — particularly doubt resolution and course structuring — need attention. Most students appreciate the relevance of their coursework and the support they received. However, the gap between theory and application remains a concern.

**Recommendations**

Integrate real-world application questions into the curriculum to bridge the gap between theory and practice.

Conduct training workshops with companies to help academic staff better align course structure with real-world industry expectations.

Improve use of visual aids and presentations to enhance clarity and engagement.

Create feedback follow-up systems where department heads can address concerns raised in student internship reflections.

Track sentiment over time across semesters to measure improvements and student satisfaction trends.

This is the sharable link of my jupyter code

http://localhost:8888/lab/tree/Student\_Feedback\_Analysis.ipynb