STUDENT FEEDBACK

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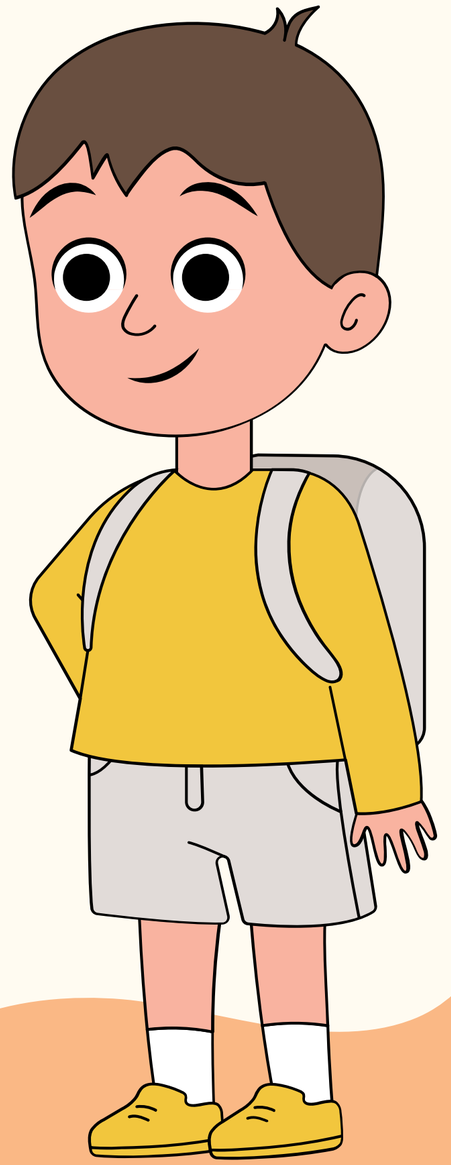
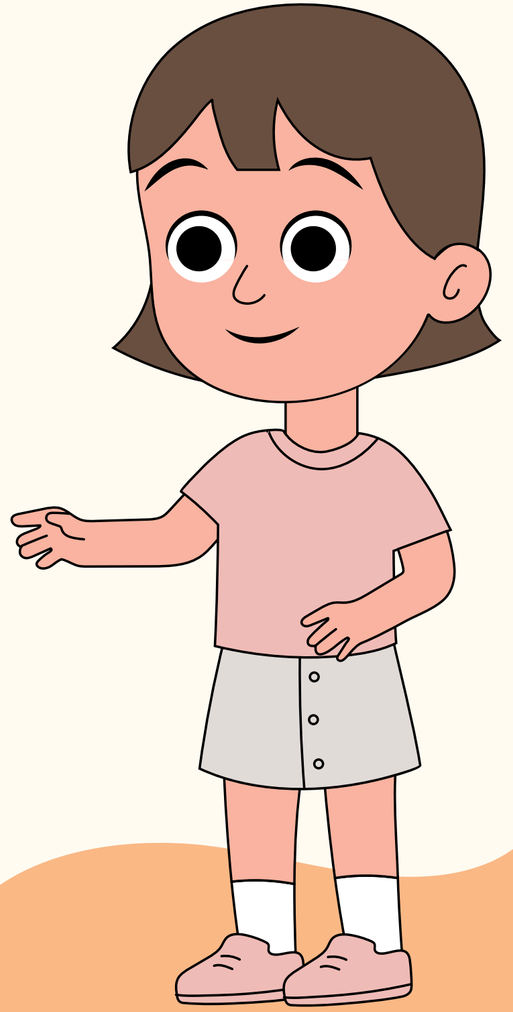
INTRODUCTION

This project analyzes student feedback to uncover insights that improve teaching and learning experiences. It involves cleaning data, exploring patterns, and visualizing responses to identify strengths and areas needing attention. The goal is to use students' voices to shape better academic and support systems in a meaningful way.



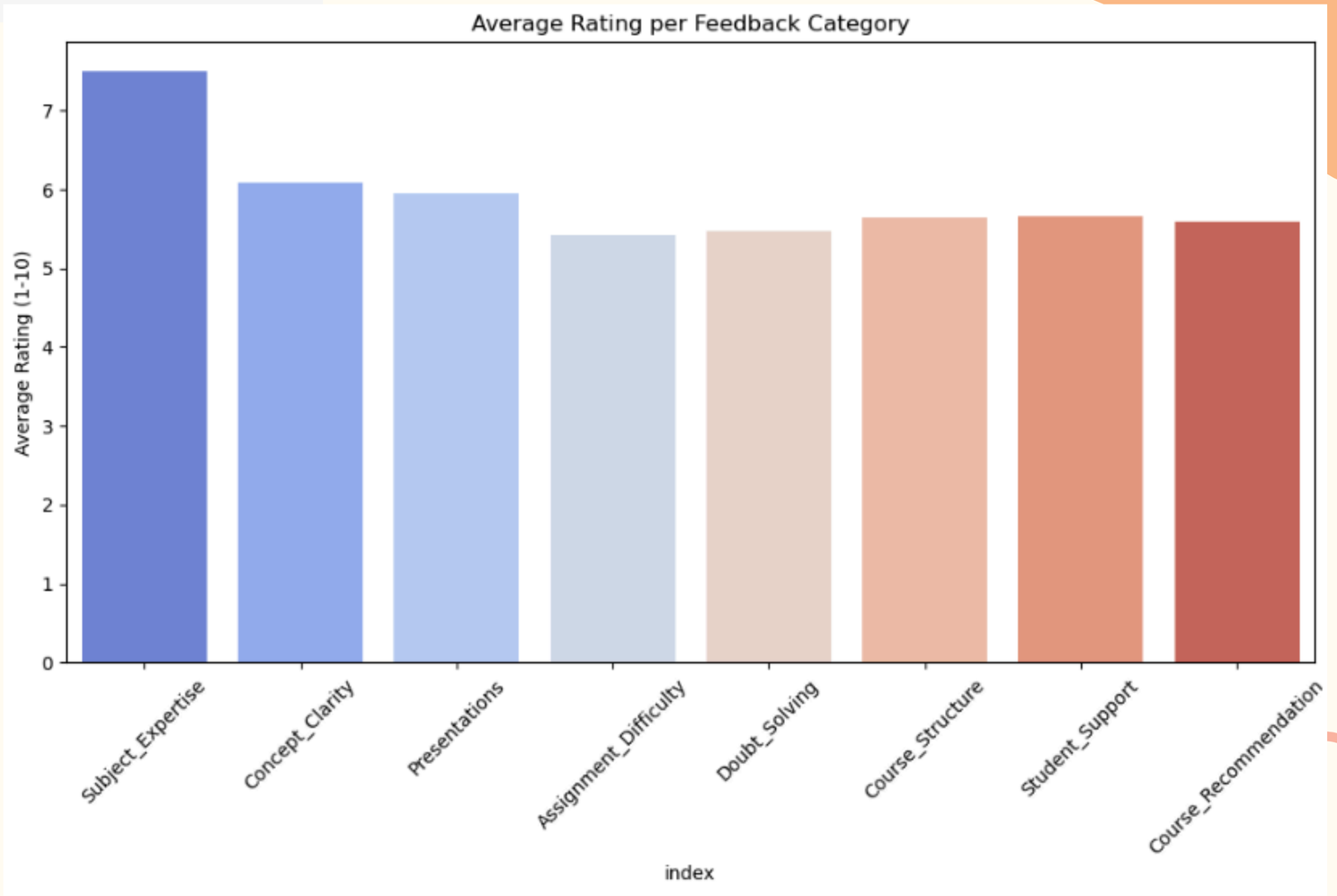
BACKGROUND

Understanding student feedback is crucial for enhancing the quality of education. Institutions often collect responses on teaching, course content, and facilities, but these insights remain underutilized. This project bridges that gap by transforming raw feedback data into meaningful patterns, helping educators and administrators make informed, student-centric decisions.



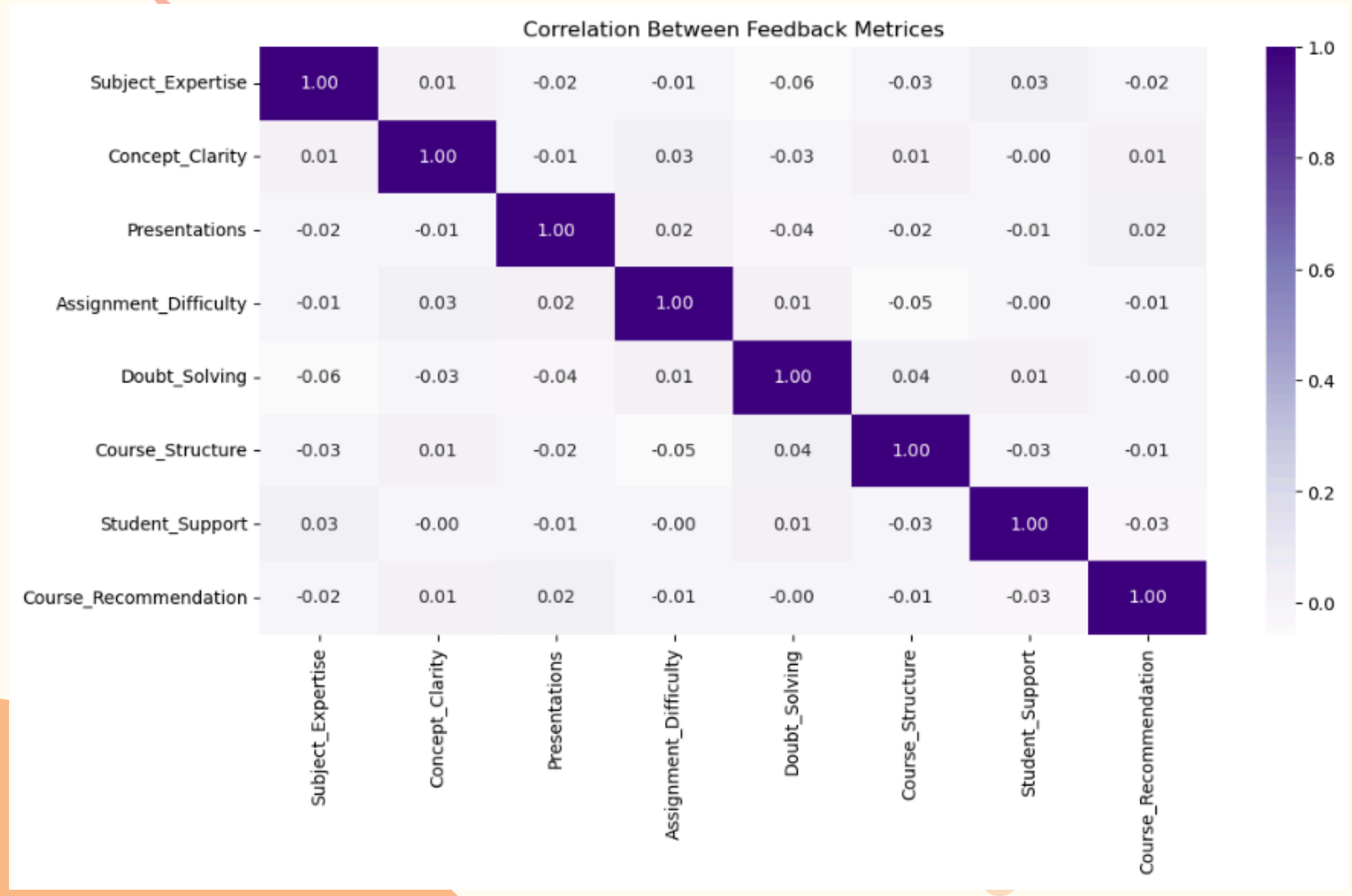
AVERAGE RATING FOR EACH ASPECT

```
plt.figure(figsize=(12, 6))
sns.barplot(data=df.mean().reset_index(), x="index", y=0, palette="coolwarm")
plt.xticks(rotation=45)
plt.ylabel("Average Rating (1-10)")
plt.title("Average Rating per Feedback Category")
plt.show()
```



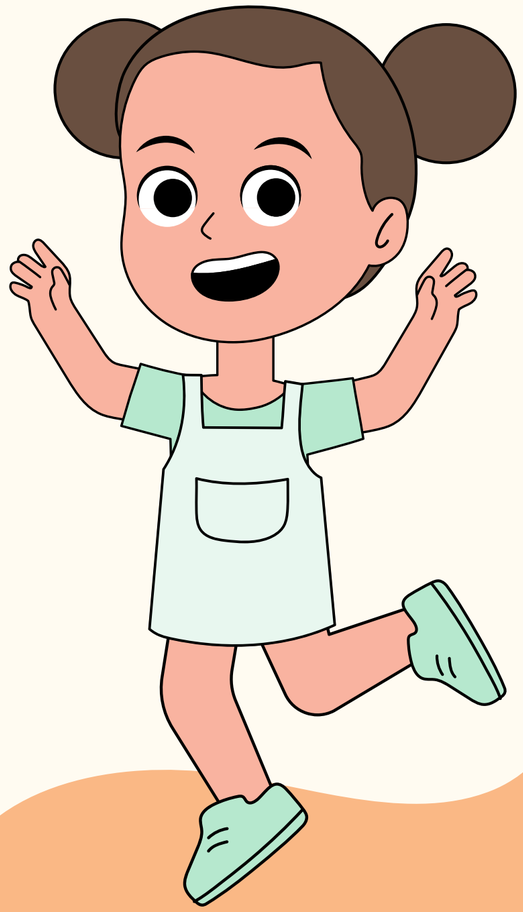
CORRELATION HEATMAP BETWEEN ALL RATING ASPECTS

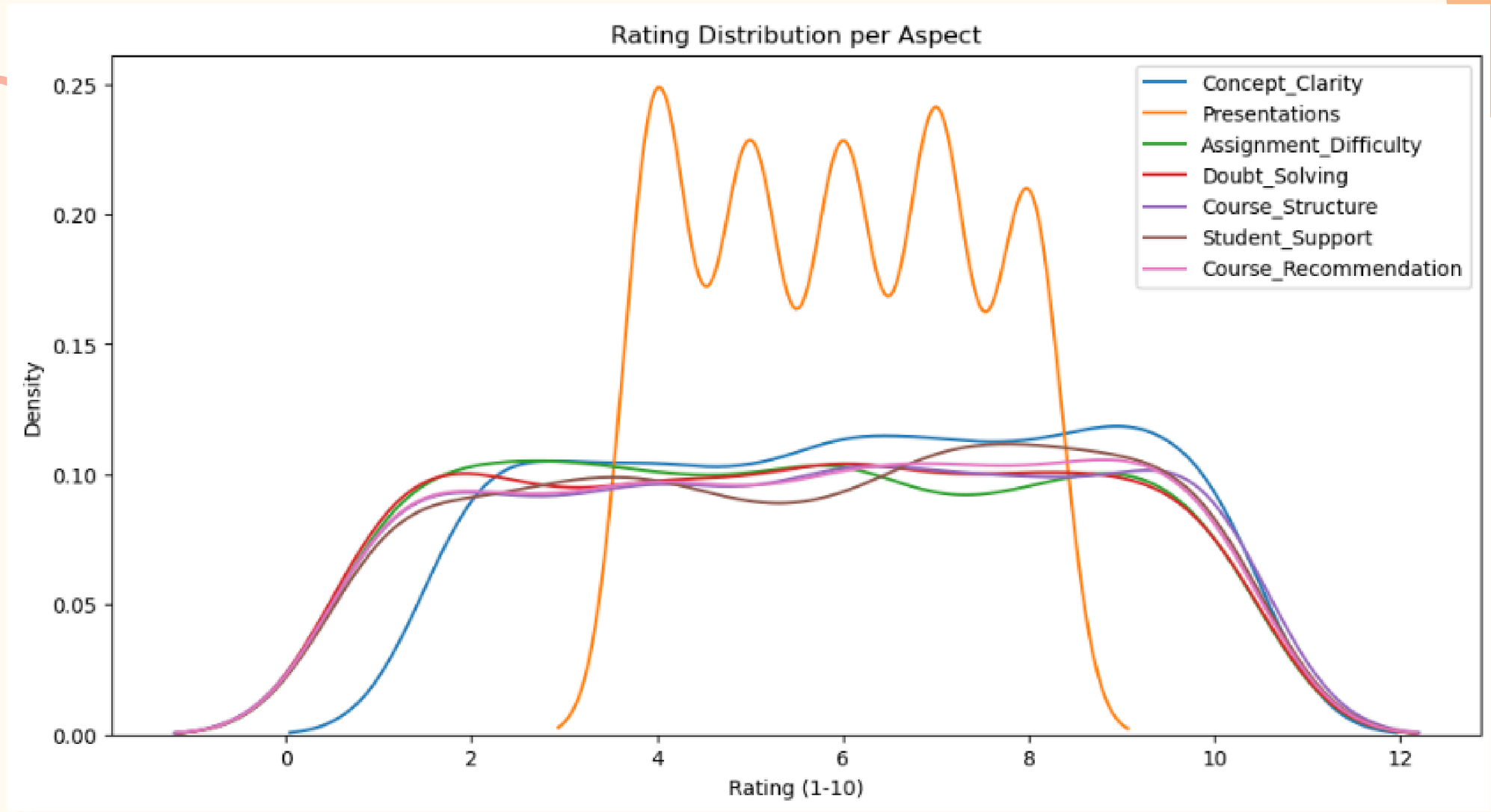
```
plt.figure(figsize=(12,6))
sns.heatmap(df.corr(), annot=True, cmap="Purples", fmt=".2f")
plt.title("Correlation Between Feedback Metrices")
plt.show()
```



DISTRIBUTION PLOT BASED ON RATING DISTRIBUTION

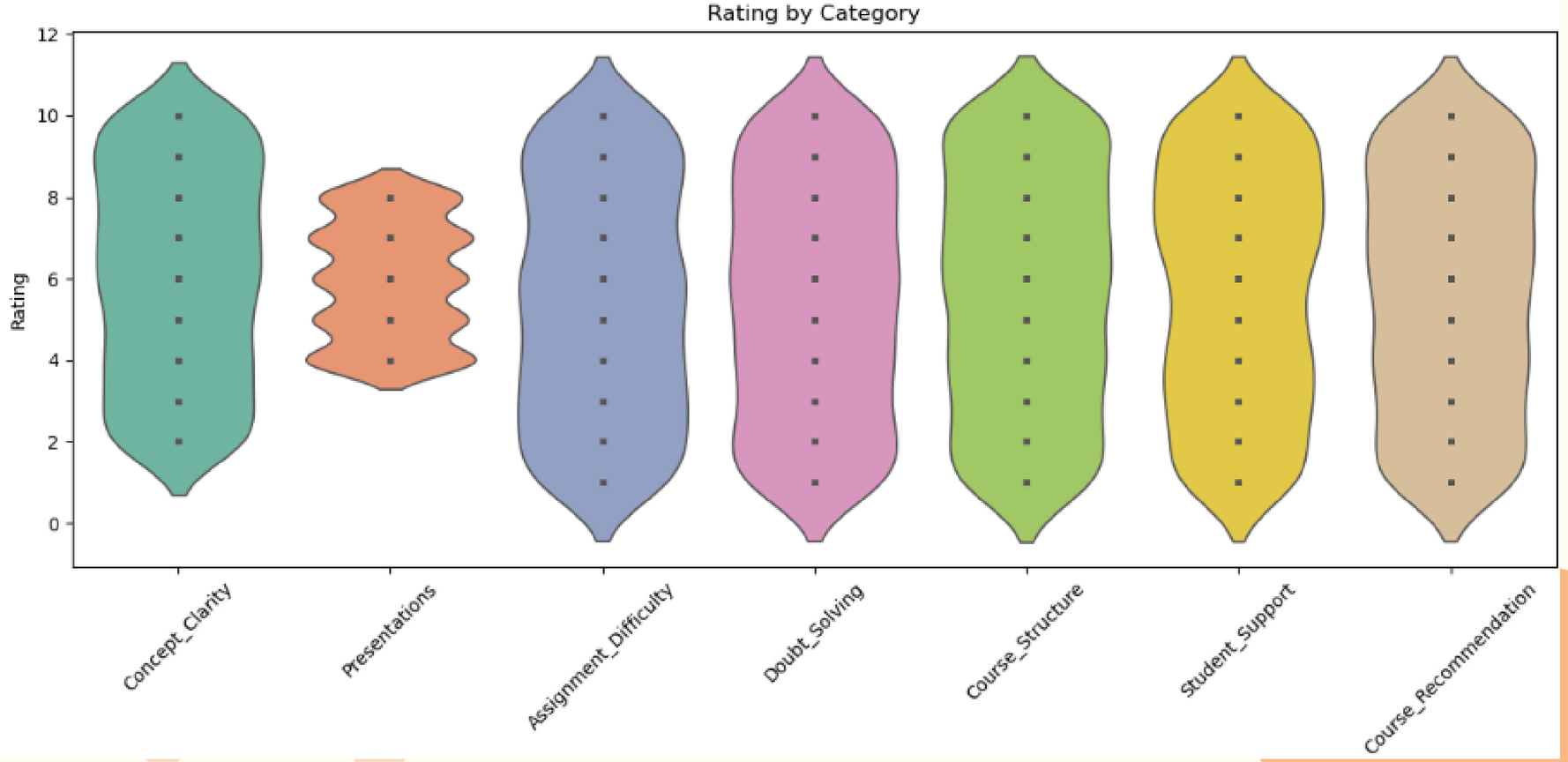
```
plt.figure(figsize = (12, 6))
for column in df.columns[1:]:
    sns.kdeplot(df[column], label=column)
plt.title("Rating Distribution per Aspect")
plt.xlabel("Rating (1-10)")
plt.legend()
plt.show()
```




Rating Distribution per Aspect
Concept_Clarity
Presentations
Assignment_Difficulty
Doubt_Solving
Course_Structure
Student_Support
Course_Recommendation
Density
0.25
0.20
0.15
0.10
0.05
0.00
0
2
4
6
8
10
12
Rating (1-10)

Violin Plot for Rating by Category

```
plt.figure(figsize=(12, 6))
sns.violinplot(data=df.iloc[:, 1:], palette="Set2", inner="point")
plt.xticks(rotation=45)
plt.title("Rating by Category")
plt.ylabel("Rating")
plt.tight_layout()
plt.show()
```



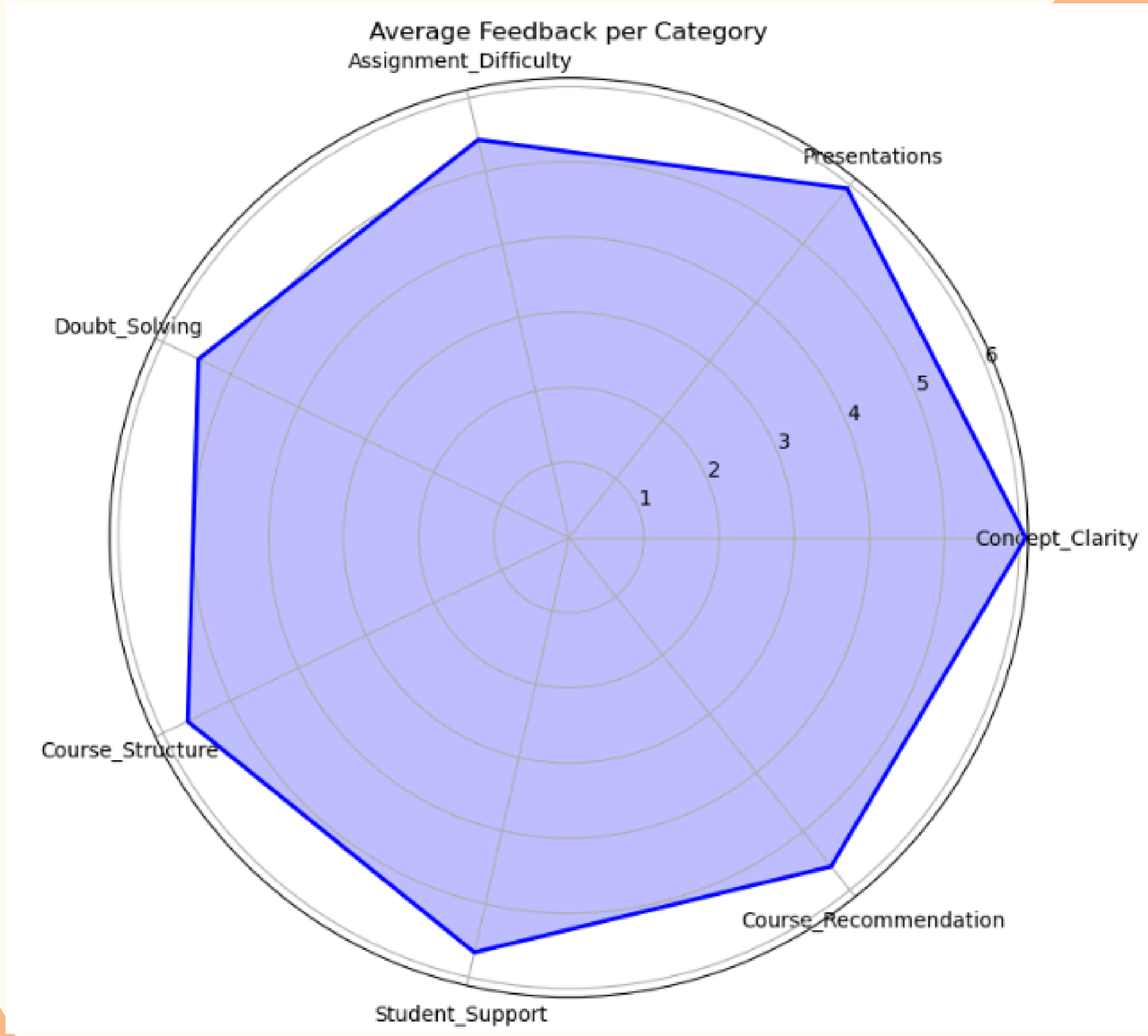
RADAR CHART FOR AVG FEEDBACK PER CATEGORY

```
categories = df.columns[1:]
values = df[categories].mean().tolist()

angles = np.linspace(0, 2 * np.pi, len(categories), endpoint=False).tolist()
values += values[:1]
angles += angles[:1]

fig, ax = plt.subplots(figsize=(8,8), subplot_kw=dict(polar=True))
ax.plot(angles, values, color='blue', linewidth=2)
ax.fill(angles, values, color='blue', alpha=0.25)

ax.set_xticks(angles[:-1])
ax.set_xticklabels(categories, fontsize= 10)
ax.set_title("Average Feedback per Category")
plt.show()
```


Average Feedback per Category
Assignment_Difficulty
Presentations
Concept_Clarity
Course_Recommendation
Student_Support
Course_Structure
Doubt_Solving
1
2
3
4
5
6

HIGHEST AND LOWEST RATING ASPECTS

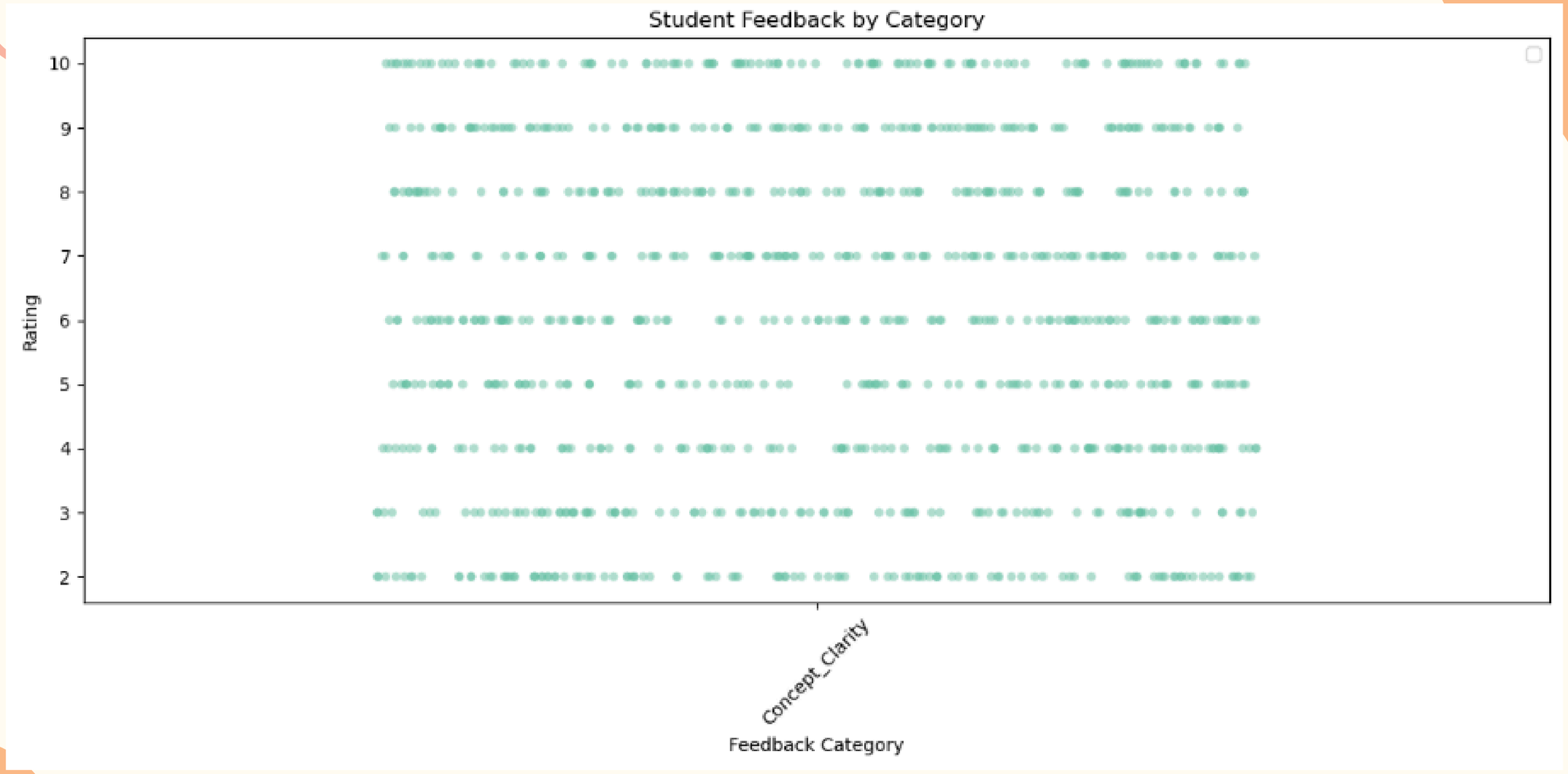
```
rating_avg = df.mean().sort_values(ascending = False)
rating_avg
```

```
Subject_Expertise          7.497502
Concept_Clarity            6.081918
Presentations              5.942058
Student_Support            5.662338
Course_Structure           5.636364
Course_Recommendation      5.598402
Doubt_Solving              5.474525
Assignment_Difficulty      5.430569
dtype: float64
```

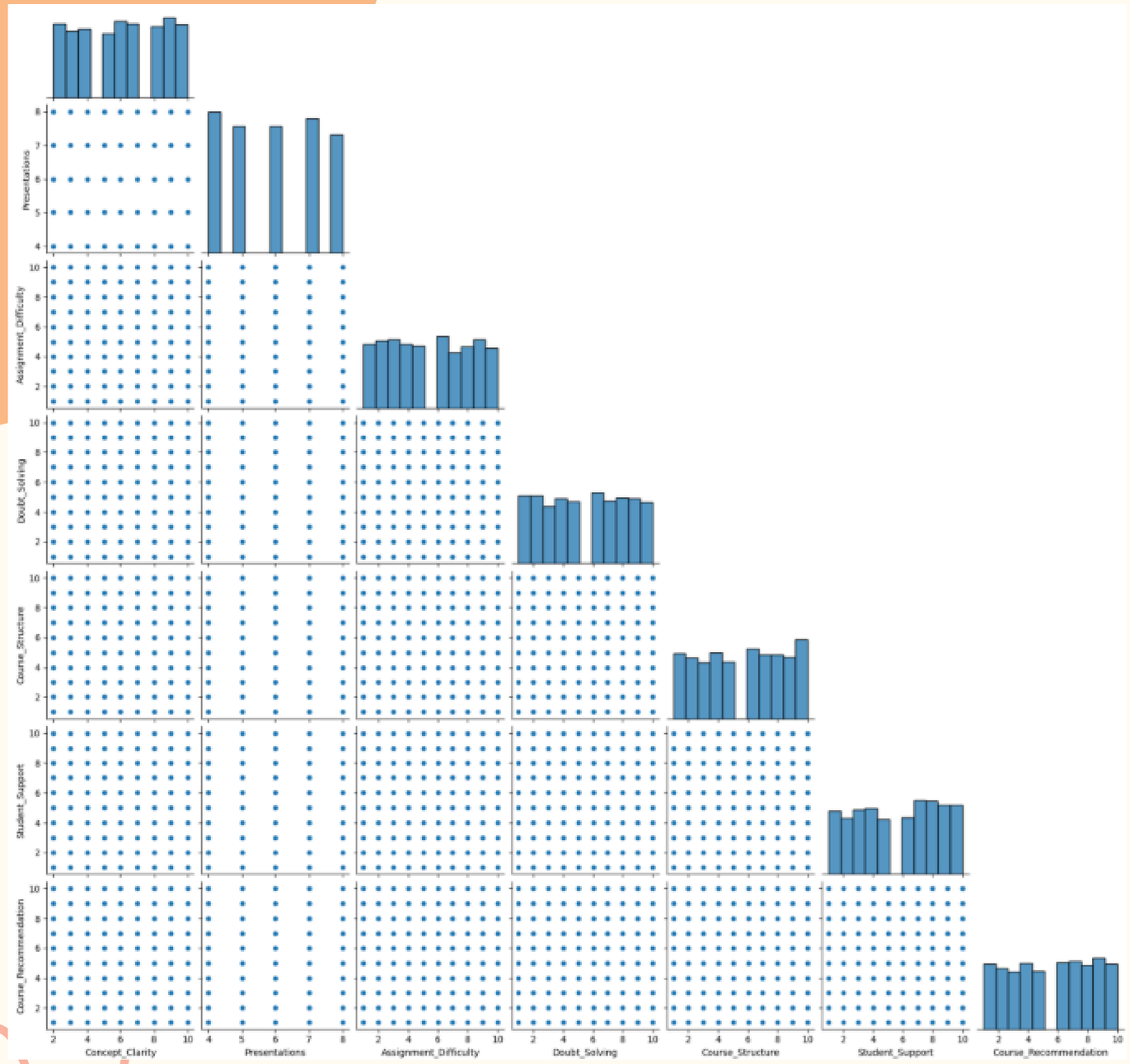
CALCULATING AVERAGE RATING FOR EACH CATEGORY

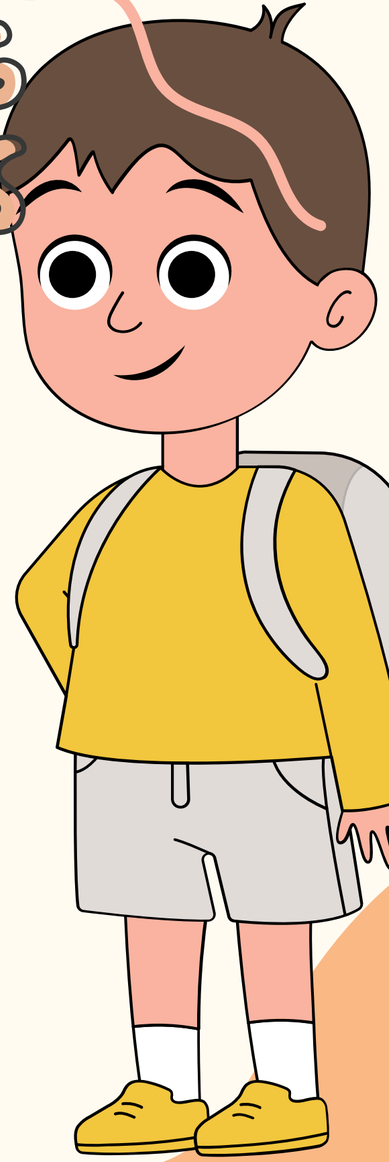
```
df_long = df.iloc[:, 1].reset_index().melt(id_vars="index", var_name="Category", value_name= "Rating")
df_long.rename(columns={"index" : "Student Index"}, inplace=True)

plt.figure(figsize=(12,6))
sns.stripplot(data=df_long, x="Category", y="Rating", hue="Category", dodge=False, alpha=0.5, jitter=0.3, palette="Set2")
plt.title("Student Feedback by Category")
plt.xticks(rotation=45)
plt.xlabel("Feedback Category")
plt.ylabel("Rating")
plt.legend()
plt.tight_layout()
plt.show()
```


Student Feedback by Category
Rating
10
9
8
7
6
5
4
3
2
Concept_Clarity
Feedback Category

VISUAL CORRELATION BETWEEN ALL RATING FEATURES

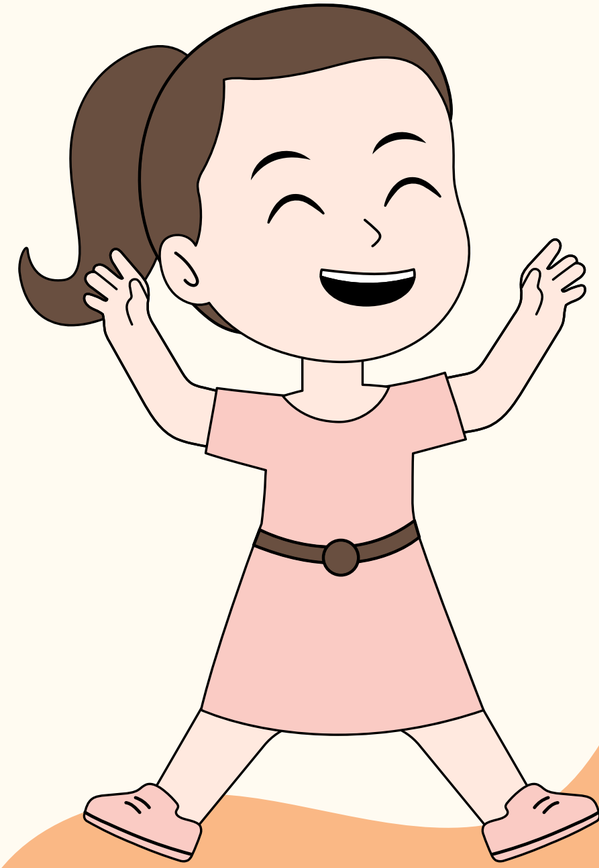


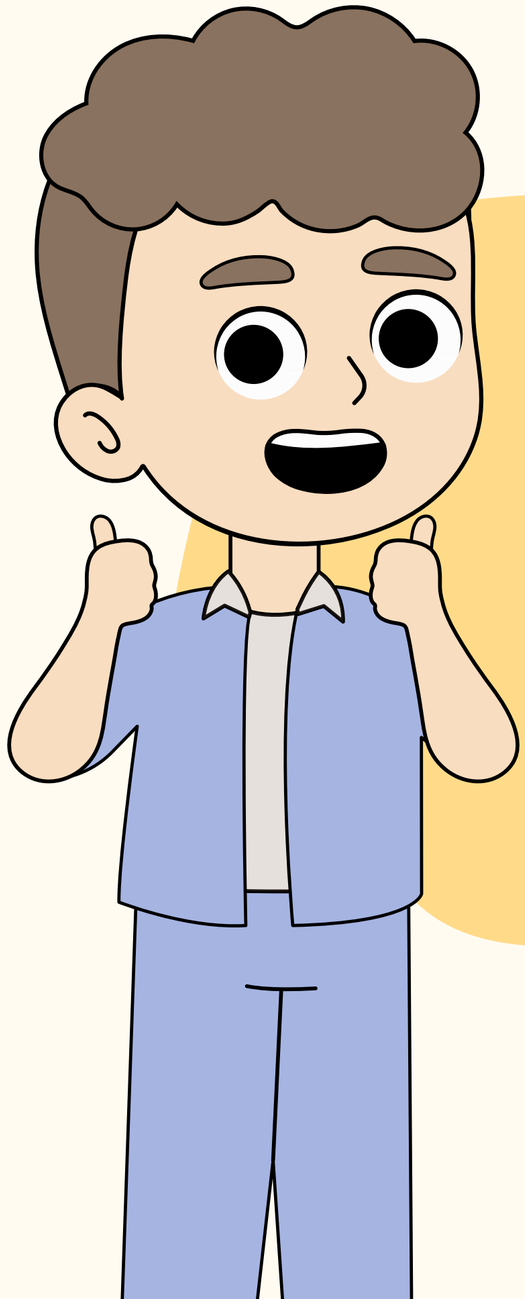


```
sns.pairplot(df.iloc[:, 1:], corner=True)
```

CONCLUSION

The student feedback analysis reveals that while core teaching aspects like Subject Expertise and Concept Clarity are well-received, areas like Assignment Difficulty and Doubt Solving require improvement. By focusing on these insights, institutions can enhance academic support, improve student satisfaction, and foster a more effective learning environment.





THANK YOU