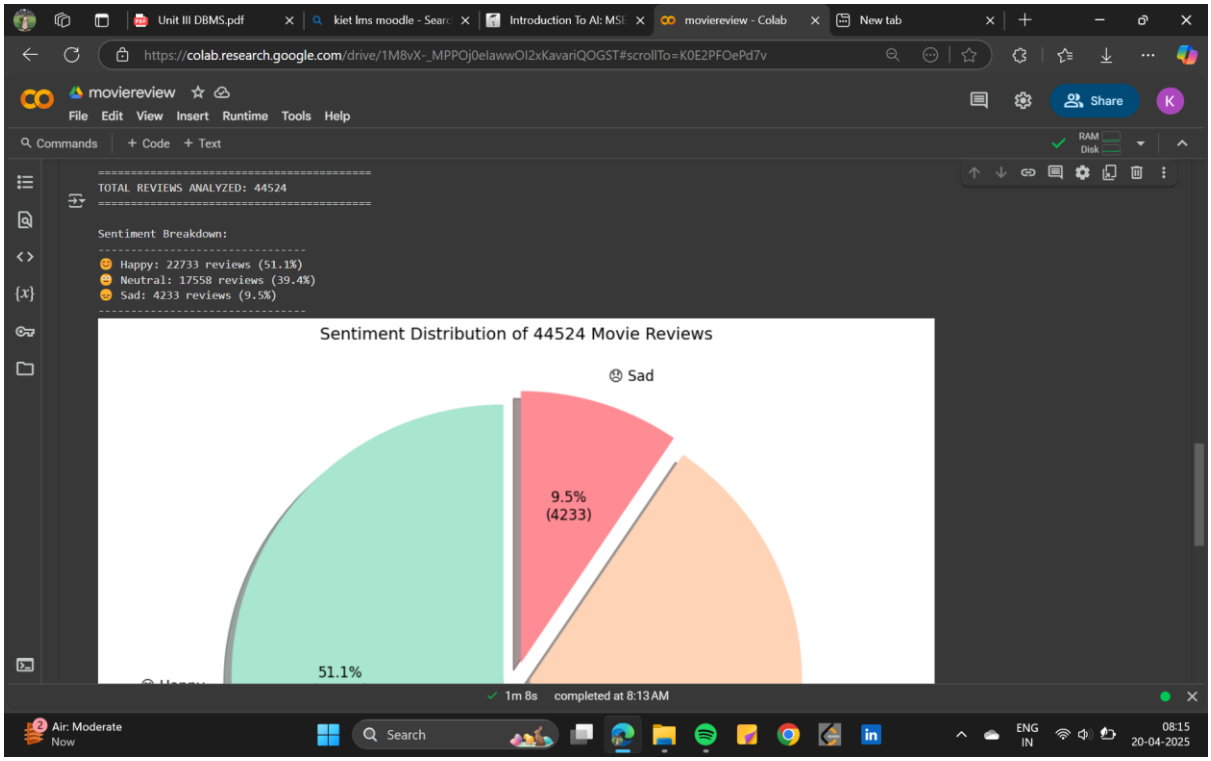
CODE:

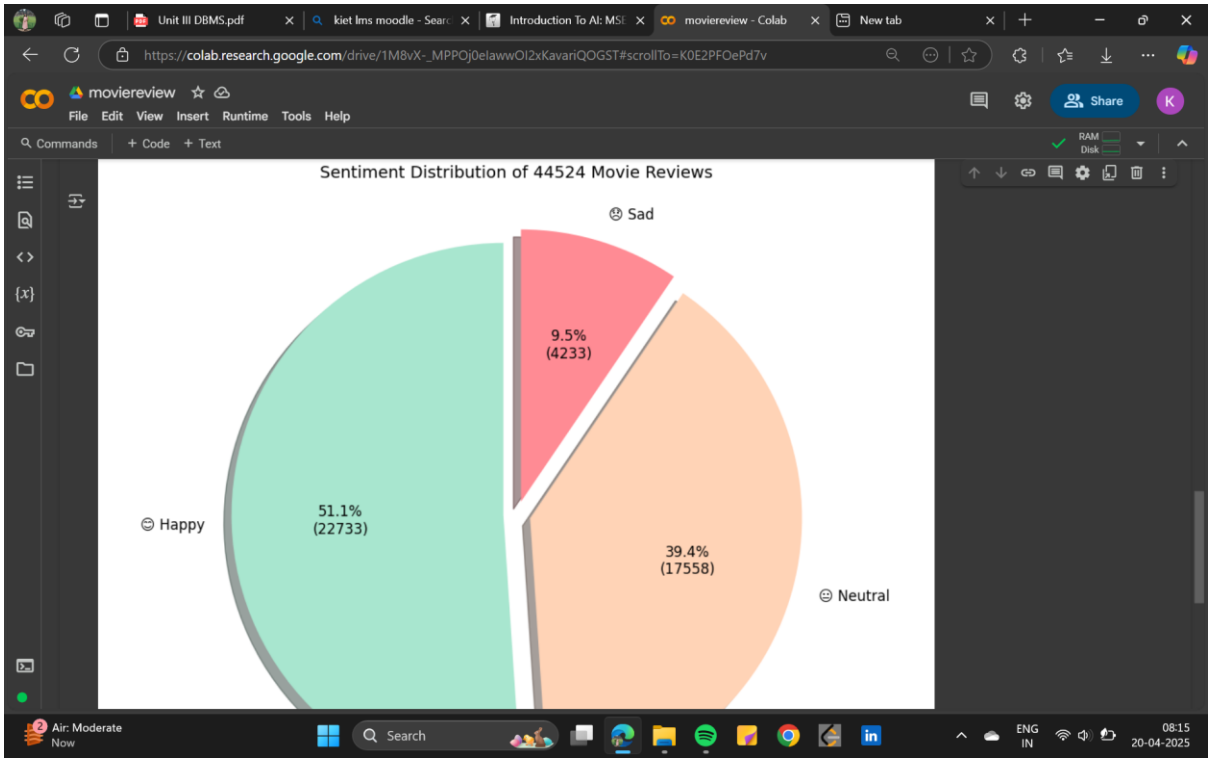
```
import pandas as pd
from textblob import TextBlob
import matplotlib.pyplot as plt

# Function to classify review sentiment
def classify_sentiment(review):
    analysis = TextBlob(str(review))
    polarity = analysis.sentiment.polarity

    if polarity > 0.1:
        return '       Happy'
    elif polarity < -0.1:
        return '     Sad'
    else:
        return '       Neutral'

csv_path = 'IMDB Dataset.csv'

# Load the dataset
df = pd.read_csv(csv_path, on_bad_lines='skip', encoding='utf-8')

# Ensure the review column is named correctly
if 'review' not in df.columns:
    text_columns = [col for col in df.columns if 'text' in col.lower() or 'review' in col.lower()
or 'comment' in col.lower()]
    df.rename(columns={text_columns[0]: 'review'}, inplace=True)

# Apply sentiment analysis
df['sentiment'] = df['review'].apply(classify_sentiment)
total_reviews = len(df)
```

```
# Count sentiment results
sentiment_counts = df['sentiment'].value_counts()
percentages = (sentiment_counts / total_reviews) * 100

# Prepare result summary
results_df = pd.DataFrame({
   'Sentiment': ['      Happy', '      Neutral', '     Sad'],
   'Count': [
      sentiment_counts.get('      Happy', 0),
      sentiment_counts.get('      Neutral', 0),
      sentiment_counts.get('     Sad', 0)
   ],
2
   'Percentage': [
      round(percentages.get('      Happy', 0), 1),
      round(percentages.get('      Neutral', 0), 1),
      round(percentages.get('     Sad', 0), 1)
   ]
})

# Print sentiment breakdown
print("========================================")
print(f"TOTAL REVIEWS ANALYZED: {total_reviews}")
print("========================================")
print("\nSentiment Breakdown:")
print("--------------------------------")
for _, row in results_df.iterrows():
   print(f"{row['Sentiment']}: {row['Count']} reviews ({row['Percentage']}%)")
print("--------------------------------")
```

```
# Pie chart
plt.figure(figsize=(10, 8))
colors = ['#a8e6cf', '#ffd3b6', '#ff8b94']
explode = (0.05, 0.05, 0.05)

def make_autopct(values):
    def my_autopct(pct):
        total = sum(values)
        val = int(round(pct * total / 100.0))
        return f'{pct:.1f}%\n({val})'
    return my_autopct

plt.pie(
    results_df['Count'],
    labels=results_df['Sentiment'],
    colors=colors,
    explode=explode,
    autopct=make_autopct(results_df['Count']),
    startangle=90,
    shadow=True,
    textprops={'fontsize': 12}
)

plt.axis('equal')
plt.title(f'Sentiment Distribution of {total_reviews} Movie Reviews', pad=20, fontsize=14)
plt.tight_layout()
plt.show()
```

OUTPUT:


movieview - Colab
movieview
File Edit View Insert Runtime Tools Help
Share
TOTAL REVIEWS ANALYZED: 44524
Sentiment Breakdown:
Happy: 22733 reviews (51.1%)
Neutral: 17558 reviews (39.4%)
Sad: 4233 reviews (9.5%)
Sentiment Distribution of 44524 Movie Reviews
Sad
9.5%
(4233)
51.1%
1m 8s completed at 8:13 AM
Search
08:15
20-04-2025


movieview - Colab
movieview
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Sentiment Distribution of 44524 Movie Reviews
Sad
9.5%
(4233)
Happy
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(22733)
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(17558)
Neutral
Search
08:15
20-04-2025