

# 1. Initial Markdown to JSON Conversion

- **Started** with a `.md` (Markdown) file containing student responses.
- **Copied Python code** from ChatGPT (me!) that reads the markdown file, parses it by numbered entries, and converts it into structured **JSON** format.
- **Used Google Colab** to run the provided Python code to process the `.md` file and create a clean `.json` file.

The screenshot shows a Google Colab notebook titled "IC Analysis.ipynb". The code cell contains Python code for reading a Markdown file, extracting responses using regular expressions, and saving them as a JSON file. The output of the cell shows the successful conversion of 38 responses. The sidebar on the left shows files like "sample\_data", "Professor\_1\_Responses\_Standardized.md", "Professor\_1\_Responses\_Standardized.txt", and "Professor\_1\_Responses\_Standardized\_full.json". The bottom status bar indicates "70.84 GB available" and "0s completed at 8:13PM".

```
import re
import json

# Step 1: Load the Markdown file
with open('/content/Professor_1_Responses_Standardized.md', 'r', encoding='utf-8') as file:
    markdown_text = file.read()

# Step 2: Use regex to split responses by number + period (e.g., '1.', '2.', etc)
# We'll capture both the student ID and their corresponding text
pattern = r"(\d+)\.(\s+.)?\s*(?:\d|\$)" # Match number, response, up until next number
matches = re.findall(pattern, markdown_text, re.DOTALL)

# Step 3: Build a list of dictionaries
responses = []
for student_id, response_text in matches:
    responses.append({
        "student_id": int(student_id),
        "response": response_text.strip()
    })

# Step 4: Save it to a JSON file
output_path = '/content/Professor_1_Responses_Standardized_full.json'
with open(output_path, 'w', encoding='utf-8') as json_file:
    json.dump(responses, json_file, indent=4, ensure_ascii=False)

print(f"Successfully saved {len(responses)} responses to {output_path}")

Successfully saved 38 responses to /content/Professor_1_Responses_Standardized_full.json
```

```
print(json.dumps(json_data, indent=4))
```

```
[{"student_id": 1, "response": "I did not realize that Grammarly Report could only be used in Docs. I write all of my assignments in Word. Therefore, I made the decision not to use AI for assistance on this essay as I am arguing against AI in the paper and because Grammarly\u2019s AI mostly helped me out with grammar, and I also asked it for ideas on how to conclude my essay."}, {"student_id": 2, "response": "I did not use Grammarly this time because I already had an idea of what I was going to write about and the direct feedback from Grammarly did not help me much in improving my writing."}, {"student_id": 3, "response": "I actually really struggled with Grammarly, and it extended the time it took me to write my paper as well as lost some points on my assignment."}, {"student_id": 4, "response": "I found Grammarly and the AI assistant very helpful in editing my work, as they helped me articulate my thoughts and correct punctuation errors."}, {"student_id": 5, "response": "In regards to Grammarly, I found that it was very helpful in correcting punctuation and, not shockingly, grammar errors."}, {"student_id": 6, "response": "It helped with word spelling, unnecessary run-on sentences, and it let me know where to put periods and quotation marks."}, {"student_id": 7, "response": "I had trouble with trying to figure out how to use it. I wasn't able to get it connected to my Google Docs, but I honestly don't really know because I don't know if I did this assignment right, but I believe my attachment bel"}, {"student_id": 8, "response": "I honestly don't really know because I don't know if I did this assignment right, but I believe my attachment bel"}, {"student_id": 9, "response": "I honestly don't really know because I don't know if I did this assignment right, but I believe my attachment bel"}, {"student_id": 10, "response": "I honestly don't really know because I don't know if I did this assignment right, but I believe my attachment bel"}]
```

Colab is an online code editor from Google specifically designed for data analysis type work.  
Link [🔗 IC Analysis.ipynb](#)

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## 2. Sentiment Analysis and Classification

- Uploaded the **JSON file** to ChatGPT.
  - Requested initial sentiment analysis using a simple three-category model: **Positive**, **Mixed**, or **Negative**.
  - Reviewed and discussed how to improve the sentiment rating system to better capture intensity and ethical concerns.
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## 3. Advanced Sentiment Analysis

- Refined the sentiment model to include six nuanced categories:

- Strong Positive
- Moderate Positive
- Neutral / Unclear
- Moderate Negative
- Strong Negative
- Ethical Concern

The screenshot shows a web browser window with multiple tabs open, including various Google Sheets and CSV files. The main content is the ChatGPT interface.

**Example Mapping**

Student	Old Rating	New Rating	Why
#1	Positive	Moderate Positive	They found it helpful but had tech friction.
#5	Negative	Strong Negative	They described it as a "nightmare."
#12	Mixed	Ethical Concern	Feels they "cheated" with Grammarly AI.
#16	Positive	Strong Positive	They advocate universities should promote AI use.
#18	Mixed	Moderate Negative	Frustrated but still sees it useful for younger students.

**Suggested Final Categories**

"13" cell

Ask anything

Add teammates

Invite coworkers to ChatGPT

ChatGPT can make mistakes. OpenAI doesn't use CATTI workspace data to train its models.

- Ran new code to reclassify all responses using this **more sophisticated sentiment system**.

student id, response and advanced sentiment columns please.

Here's the CSV file you asked for, containing the Student ID, Response, and Advanced Sentiment Rating:

[Download the CSV](#)

Let me know if you need any more formatting tweaks or summaries!

Ask anything

Student Responses Advanced Sentiment Analysis				
student_id	response	sentiment_rating	justification	advanced_sentiment
1 1	I did not realize that Grammarly Report could only be used in Docs. I write all of my	Mixed	Student's response included both benefits and drawbacks without a clear	Moderate Positive
2 2	I made the decision not to use AI for assistance on this essay as I am	Mixed	Student noted both positive aspects (such as usefulness) and negative aspects	Moderate Positive
3 3	Grammarly's AI mostly helped me out with grammar, and I also asked it for ideas on how	Mixed	Student noted both positive aspects (such as usefulness) and negative aspects	Moderate Positive
4 4	I did not use Grammarly this time because I already had an idea of what I was	Mixed	Student noted both positive aspects (such as usefulness) and negative aspects	Moderate Positive
5 5	I actually really struggled with Grammarly, and it extended the time it took me to write	Mixed	Student noted both positive aspects (such as usefulness) and negative aspects	Strong Negative
6 6	I found Grammarly and the AI assistant very helpful in editing my work, as they	Mixed	Student noted both positive aspects (such as usefulness) and negative aspects	Strong Positive
7 7	In regards to Grammarly, I found that it was very helpful in correcting	Mixed	Student noted both positive aspects (such as usefulness) and negative aspects	Strong Positive
8 8	It helped with word spelling, unnecessary run-on sentences,	Mixed	Student noted both positive aspects (such as usefulness) and	Moderate Positive

- Generated a visual summary (bar chart) and data table summarizing the distribution of sentiments.

The screenshot shows the ChatGPT interface with a dark theme. On the left, there's a sidebar with various projects and tasks listed under categories like 'Today', 'Yesterday', and 'Time Management Breakdown'. The main area displays two charts: a table titled 'Summary Of Advanced Sentiment Ratings' and a bar chart titled 'Distribution Of Advanced Sentiment Ratings'. The table data is as follows:

	Sentiment	Count	Percentage
1	Moderate Positive	13	34.210526315789 47
2	Strong Positive	10	26.315789473684 21
3	Neutral / Unclear	9	23.684210526315 788
4	Moderate Negative	3	7.8947368421052 63
5	Strong Negative	2	5.26315789473684 42
6	Ethical Concern	1	2.6315789473684 21

The bar chart shows the same data with orange bars. The x-axis categories are 'Moderate Positive', 'Strong Positive', 'Neutral / Unclear', 'Strong Negative', 'Moderate Negative', and 'Ethical Concern'. The y-axis is labeled 'Number of Responses' from 0 to 12.

## 4. Data Export

- Created a cleaned CSV file containing only:
  - Student ID
  - Full Response
  - Advanced Sentiment Rating
- Downloaded the CSV from ChatGPT to your computer.

## 5. Post-Processing in Google Sheets

- Imported the CSV into Google Sheets.

- **Converted the imported data into a Table** for easier viewing and filtering.
  - **Added a Chart** to visualize sentiment distribution more clearly
  - **Enhanced usability** by:
    - Making the **Sentiment Rating column a Dropdown List** with predefined options.
    - **Applied color coding** to dropdown options to make manual sentiment verification and adjustments easier for humans (e.g., red for Strong Negative, green for Strong Positive, etc.).
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Link to ChatGPT conversation. Images and files aren't available in shared links however.

<https://chatgpt.com/share/e/67f4a08e-1d78-800a-9536-eceebc903644>