**Sentiment Model Comparison:**

1. **Llama 2**

* Time taken to generate sentiment:

Time taken for generating approximate 1200 tokens is 9 minutes.

* Accuracy:

Moderate accuracy than GPT-API

For Example:

Ques\_text = “What are the three main things you think your school could improve upon?”

Response\_text = “In school lots of things need to improve there is nothing in school all is bad experience for our batch of students.”

Sentiment\_generated =

Llama-2: {'sentiment': 'NEUTRAL', 'score': 0}

GPT-API: {'sentiment': 'Negative', 'score': '-0.8'}

* Required GPU which will be costly.

1. **GPT-API**

* Time taken to generate sentiment:

Time taken for generating approximate 1200 tokens is 1 minutes.

* Accuracy:

Good accuracy but for some of the responses sentiment not generated which we can improve.

* Not Required GPU.

1. **Roberta**

* Time taken to generate sentiment:

Time taken for generating approximate 1200 tokens is2-3 seconds.

* Accuracy:

Less because in these sentiments are not generated in the context of questions.

* Not Required GPU.

**Integration with Web flow:**

* When User submit survey from web platform, its answers store in DB.
* From DB with help of crone we will fetch record one by one.



|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Survey\_id | Ques\_id | Ques\_text | Response\_id | Response\_text | Crone\_status | sentiment | score |
| ABC | 1 | - | a | - | pending | Null | Null |
| ABC | 2 | - | b | - | pending | Null | Null |
| ABC | 3 | - | c | - | pending | Null | Null |
| ABC | 4 | - | d | - | pending | Null | Null |
| ABC | 5 | - | e | - | pending | Null | Null |

LLM MODEL

Model Will generate sentiment & post in API, merge record with DB.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Survey\_id | Ques\_id | Ques\_text | Response\_id | Response\_text | Crone\_status | sentiment | score |
| ABC | 1 | ….. | a | …. | Completed | positive | 0.8 |

* From Above DB table with help of crone\_status & GET API we will fetch one record, it will pass to the model while crone\_status pass as ‘pending’.
* After getting sentiment & its score from model also crone\_status as ‘completed’ we will POST data in API and by using JOINS we will merge record with DB.