ASSESSMENT FOR DATA SCIENCE

First of all, thank you so much for giving me this opportunity.

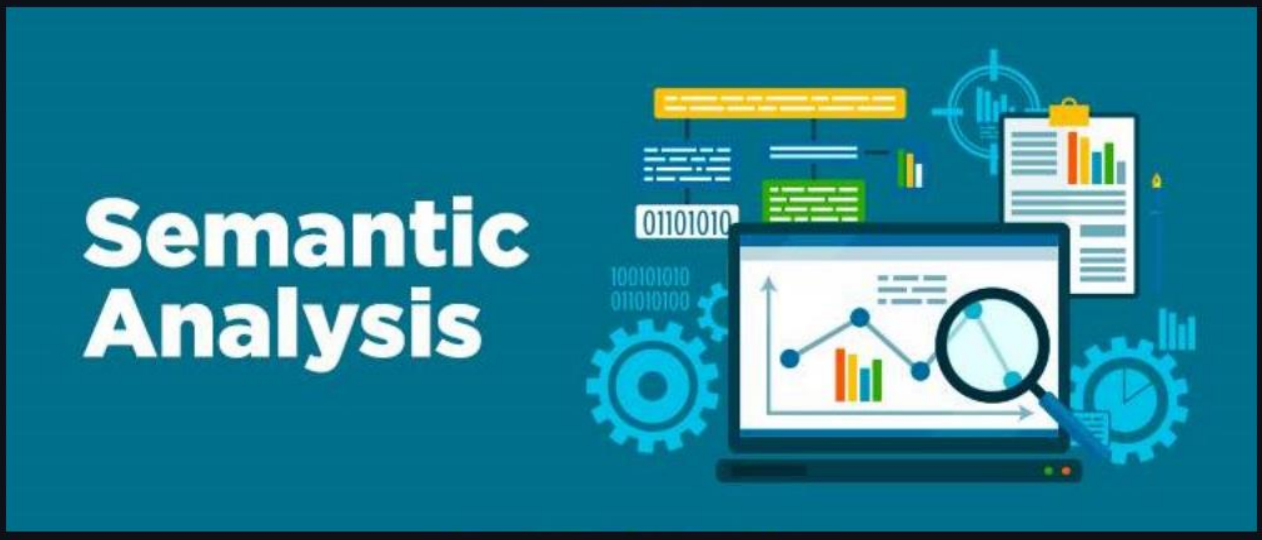
Part A:

- So, in this part I load the given model in data frame
- Then imported necessary libraries like transformer for downloading the pre-trained model.
- Here I downloaded ‘stsb-mpnet-base-v2’ model.
- The size of the model is 500mb
- This is a sentence-transformers model. It maps sentences & paragraphs to a 768-dimensional dense vector space and can be used for tasks like clustering or semantic search.
- Then I encode the sentences to get their embeddings
- After that I compute similarity scores of given two embeddings
- Similarity score lies between 0 and 1
- Closer to 0 means less similarity and closer to 1 means more similarity

Part B:

- I made a web application using streamlit.
- As we know our model size is large so its takes time to load
- So, I made app.py file
- And my web application running fine in my local system
- But I am not able to deploy my web application on cloud platform.
- The reason is my model size is more than 500 mb so I can’t deploy on Heroku as it only deploys file size up to 500.
- I also tried to deploy on streamlit.io but unfortunately, I am not able to deploy because of some unknown error
- you can see my web application on local host

semantic analysis



Semantic Similarity, or Semantic Textual Similarity, is a task in the area of Natural Language Processing (NLP) that scores the relationship between texts or documents using a defined metric.There have been a lot of approaches for Semantic Similarity. The most straightforward and effective method now is to use a powerful model (e.g. transformer) to encode sentences to get their embeddings and then use a similarity metric (e.g. cosine similarity) to compute their similarity score.

enter the 1st sentence

I am hungry

enter the 2nd sentence

I want food

Predict

similarity score is :0.8698281049728394

If there any improvement needed then please guide me. I am open to learn new things.

Thank you,

Sahil shaikh