Google colab -

<https://colab.research.google.com/drive/1cejU1et0ZQh2szQhn_r8yuiui46rrFHs#scrollTo=w1vwlNFZBQ1->  
  
**Question Answering System with BERT :**

<https://ca79-34-23-168-62.ngrok-free.app/>

* A report documenting the implementation process, justifications, and findings.

1) Comprehensive Setup and Installation Guidelines

Step 1: Set Up Google Colab For saving the notebooks we completed in Google Drive, you must first open Google Colab in a browser and have a Google account.

step 2 :Installing the necessary libraries

Install the required packages on the Colab notebook by executing: Among these libraries are:

transformers: Offers BERT models that have already been trained.

datasets: For processing and managing data.

torch: This deep learning system that powers BERT.

Streamlit: To develop an easy-to-use online interface.

Pyngrok: To make the Streamlit app available to the public.

step 3:Load the previously trained BERT model in step three.

This loads a BERT model that has been adjusted.

Step 4 : Upload Your Dataset

Put it on Google Colab. A CSV file called glassdoor\_reviews\_val\_reviewResponses

Examine the dataset.

2) how to run :

Step 1 : define the function that answers questions.

This function returns the anticipated response from BERT after receiving a questions and contextual as input.

Step 2: Make a Streamlit Web Application

Make a fresh Python script in Colab, such as app.py.

Step 3: Launch Google Colab's Streamlit Web App.

Launch the Streamlit server.

A public link to our BERT QA Systems will be created as a result.

Step 4: Use Ngrok to Deploy (Alternative Method)

We can utilize the Ngrok for making the app publically available if localtunnel isn't working.

3) To answer questions, our research makes use of a transformer-based natural language processing paradigm called BERT, as the (Bidirectional Encoder The representations from Transformers). BERT is very good at extracting precise responses since it analyzes text in both directions, meaning it can comprehend context from both the left and the right. Using our collection of Glassdoor evaluations, we optimized the BERT Questions Answering (QA) model to deliver pertinent responses depending on employee input. The model predicts the most pertinent response inside the text after receiving a question and a context (a review text) as input.

* AI Model Developer - Using this dataset, I optimized a pre-trained BERT network for the particular goal of answering questions. I’ve loaded the BERT model using the Hugging Face Transformers library, adjusted it for this dataset, and made the model answered context-based queries effectively.
* Frontend Developer - Using Streamlit, i created an intuitive user experience as the frontend developer. We could input questions and context using this interface, which also showed the model's responses. the application was responsive, providing a smooth interaction with the model.
* Data Engineer - Uploading and analyzing the data set in Google Colab was my responsibility as a data engineer. In order to fine-tune the BERT model, I were in charge of extracting relevant characteristics from the "glassdoor\_reviews\_val\_reviewResponses.csv" dataset. In order to comply with the model's specifications, this required reading and processing the dataset.  
    
  These are the above screen shots which I’ve worked on:

1)A screenshot of a computer

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2)

A screenshot of a computer

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7)

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8)  
A screenshot of a question answer

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