Solution 1: Open AI plugins in Python

- Might be too expensive just put your thoughts under here and let me know what option would be better to go with

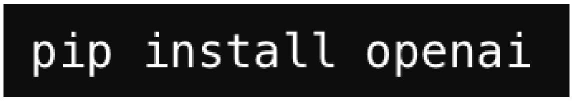
The necessary tools needed for this solution:

- A github account to create a repository
- Download VScode

When trying to sign into google:
Change url from http://127.0.0.1:5500/homePage.html to http://localhost:5500/homePage.html, error shows otherwise if using liveserver

How to install and configure OpenAI

1. First we will need to install the OpenAI library. You can do so by typing:



```
pip install openai
```

in your terminal.

2. You will need to generate an OpenAI API:

   2.1. Sign up for an account on https://openai.com/
   2.2. You'll see an API section, click on that
   2.3. Generate a new API key and copy it

3. Next you will need to set up the API key in your environment

   Windows :

   1) Type $ **setx OPENAI_API_KEY "your-api-key-here"** into your command prompt (the $ indicates that this line will be typed into a command prompt so don't include it)

   2) Then make sure to restart VScode

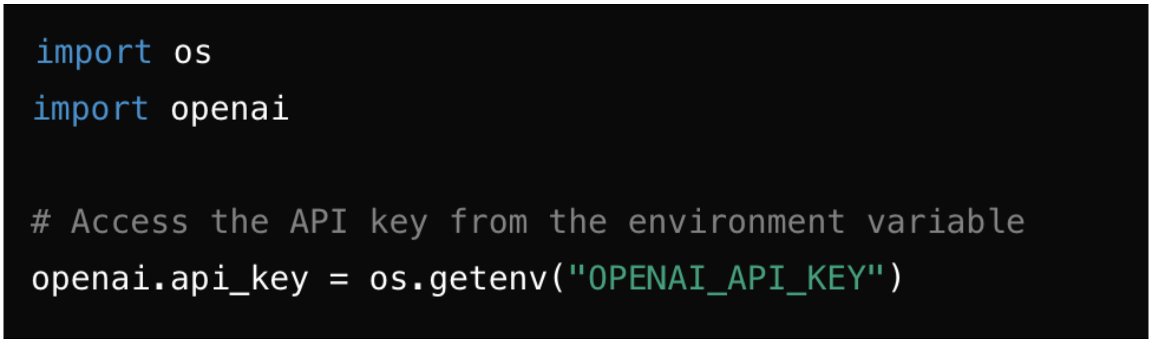
Mac :

We will be adding the following to our shell configuration file. A shell configuration file is a file that runs when a new shell is opened. So by running the lines of code below, we will make sure that certain processes will automatically run so we can properly use OpenAI. We will be using the config file: “.bashrc”.

1) Type $ **export OPENAI_API_KEY="your-api-key-here"** into your terminal (the $ indicates that this line will be typed into a command prompt so don't include it)

2) Then type $ **source ~/.bashrc** This will make sure your OpenAI key will be opened every time without you emanually doing so.

4. Now in the beginning of every code doc you will need:



```python
import os
import openai

# Access the API key from the environment variable
openai.api_key = os.getenv("OPENAI_API_KEY")
```

And from there you will be able to use OpenAI

How to clone our repository through our terminal:

To do:
Figure out how to use open ai commands - keshav, tejas, sai
Using OpenAI to Perform Sentiment Analysis - A Step-by-Step Guide
Use OpenAI's ChatGPT in Python
Sentiment Analysis with GPT-3 and GPT-3.5 | by Dr. Lovedeep Saini | Medium
Figure out how to connect email to python - karthik and anshul
Then we need a few ppl to work on the ui - shafin and hannah (research open ai and email stuff till we get to the ui stuff)

Chatgpt prompt: generate 10 emails from customers with 10 different sentiments or emotions

Solution 3: Training our own model (cheaper)

The necessary tools needed for this solution:

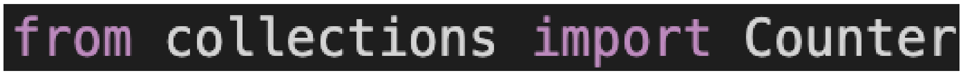
- A github account to create a repository
- Download VScode

1. First we would need to get a sample of emails

   Option 1: We can use ChatGPT and create fake emails of different categories (happy, sad, mad,etc). We can then send these emails to our group email

   Option 2: Use our own past emails and forward these emails to the group email

2. Then using these emails we will use a python library called collections and from collections we will import counter

   ```
   from collections import Counter
   ```

   Counter will identify the most common words found in each category of emails. As we input more emails the more accurate it will get

   - We will use more info below

3. There's other things in the solution we need to worry about but most of it is things that we come by while implementing whats above

Keshav, Sai, Tejas (anyone else who completes their assigned task or wants to work on this part may help) :

1) should decide if it would be easier to go with option 1 or 2 in step 1, then get the required data sample and research and figure out how big our data sample should be

2) Then we should make a google colab and try to figure out how to work with the library and experiment with small data sets

3) Then we will gather a large data set and train the model. We will be training multiple parts of the model because we need enough data for every type of sentiment we deem useful to recognize
4)

Word2Vec: This is the tool we will be using to determine which words are in similar categories. In this case it will be helping us

Solution 2: Java Stanford Core NLP

The necessary tools needed for this solution:

- A github account to create a repository
- Intellij

Steps:

1. Set Up Dependencies… allow access to less secure app in gmail
2. Fetch Emails Using JavaMail API
3. Sentiment Analysis Using Stanford CoreNLP
4. Combine Email Fetching and Sentiment Analysis

Github resources:
https://www.youtube.com/watch?v=NcoBAfJ6l2Q

Everyone’s GitHub:
Anshul: @anshulmago1
Keshav:@keshavvj
Shafin:@shafin-ula
Sai: @sairgangu
Hannah: @hannahblii
Tejas: @Yokey12321
Karthik:

Questions for AWS

1. **What is the biggest obstacle you faced when doing your project?**
2. **Is it better to output the sentiment as positive, neutral, and negative or by emotions like happy, sad, and angry?**
3. **Is it better to train your own model or use existing models like openAI API to do sentiment analysis?**

Components to Add to Website:

- **Login Screen**
- **Employee Database (contains overall happiness score, specific emails, etc.)**
- **Customer Database (contains email’s happiness score)**
- **Screen that matches customer to employee**

https://www.tensorflow.org/