

Customer Support System: An email to the customer

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INTRODUCTION

- 1) Customer Support System: An email to the customer
- 2) If you're a <u>customer service assistant for a large electronics store</u>
 - a) The website of the store allows the customers to select language.
 - b) The store's <u>products</u>
 - i) The products belong to different <u>categories</u>
 - ii) Each product has detailed description
- 3) Process for the project implementation



```
from flask import Flask, request, render_template
import os
import openai
app = Flask(__name__)
# Set vour OpenAI API kev
openai.api key = os.getenv("OPENAI API KEY")
# Define your delimiter
delimiter = "####"
# General function to get response with gpt-3.5
def get_completion_from_messages(messages,
                                 model="gpt-3.5-turbo",
                                 temperature=0,
                                 max_tokens=1000):
    response = openai.ChatCompletion.create(
        model=model,
        messages=messages,
        temperature=temperature,
        max_tokens=max_tokens,
    return response.choices[0].message["content"]
```

- Step 1: Generate a customer's comment
 - Input to ChatGPT
 - **■** The <u>products' detailed descriptions</u>
 - ChaGPT's response
 - A 100 words comment about the <u>products</u>.

Note: Please add your OpenAI API Key in **.eve.** file (do not share your API key with anyone)

```
def generate_comment():
    system_message_comment=f"""
   Product details can be found as below
        "TechPro Ultrabook":
            "name": "TechPro Ultrabook",
           "category": "Computers and Laptops",
            "brand": "TechPro",
            "model number": "TP-UB100",
            "warranty": "1 year",
            "rating": 4.5,
            "features": ["13.3-inch display", "8GB RAM",
                    "256GB SSD", "Intel Core i5 processor"],
            "description": "A sleek and lightweight ultrabook for everyday use.",
            "price": 799.99
        "BlueWave Gaming Laptop":
            "name": "BlueWave Gaming Laptop".
            "category": "Computers and Laptops",
            "brand": "BlueWave".
            "model number": "BW-GL200",
            "warranty": "2 years",
            "rating": 4.7.
            "features": ["15.6-inch display", "16GB RAM",
                    "512GB SSD", "NVIDIA GeForce RTX 3060"],
            "description": "A high-performance gaming laptop for
                    an immersive experience.",
            "price": 1199.99
```

```
user_message_comment=f"""
A less than 100 words comment about the products"""

messages_comment = [
{'role':'system',
'content': system_message_comment},
{'role':'user',
'content': f"{delimiter}{user_message_comment}{delimiter}"},
{'role':'assistant',
'content':'talk as a customer'}
]
comment = get_completion_from_messages(messages_comment)
print("Comment from customers: ")
print(comment+"\n")
return comment
```

Step 2: Generate email subject

- Input to ChatGPT
 - The customer's <u>comment</u> created from <u>Step</u> <u>1</u>.
- ChaGPT's response
 - Generate the subject of an email from the customer's <u>comment</u> using <u>Inferring</u> technique.

Step 3: Generate the summary of the customer's comment

- Input to ChatGPT
 - The customer's **comment** created from **Step 1**.
- ChaGPT's response
 - Step 3.1: Generate the summary in English from the customer's <u>comment</u> using <u>Summarizing</u> technique.

```
# Step 3: Translate to user language
GoCodeo-Generate tests for the below function
def get_translation(summary, language):
    system message translate=summary
    user_message_translate=f"""
    Translate the summary into {language} using Transforming technique"""
    messages_translate = [
    {'role':'system',
    'content': system message translate},
    {'role':'user'.
    'content': f"{delimiter}{user_message_translate}{delimiter}"},
    translate=get_completion_from_messages(messages_translate)
    print("Translation of customer comment summary in "+language+":")
    print(translate+"\n")
    return translate
```

Step 4: Sentiment analysis of the customer's comment

- Input to ChatGPT
 - The customer's <u>comment</u> created from <u>Step 1</u>.
- ChaGPT's response
 - Sentiment analysis of the customer's <u>comment</u> using <u>Inferring</u> technique.
 - The result of the <u>sentiment analysis</u> shows whether the customer's <u>comment</u> is
 - Positive, or
 - Negative

Step 5: Generate an email to be sent to the customer.

- Input to ChatGPT
 - The customer's <u>comment</u> created from <u>Step 1</u>.
 - The <u>Subject</u> generetaed from <u>Step 2</u> which is based on the customer's <u>comment</u>.
 - The <u>summary</u> of the customer's <u>comment</u>. The <u>summary</u> is generated from <u>Step</u> 3.1.
 - The result of <u>sentiment analysis</u> created from <u>Step 4</u>.
 - The customer's selected language.

- ChaGPT's response
 - An email written in the customer's <u>selected</u> <u>language</u>. The email consists of
 - 1. The <u>summary</u> of the customer's <u>comment</u>. The <u>summary</u> is generated from <u>Step 3.1</u>.
 - 2. A <u>response</u> to be sent to the customer using <u>Expanding</u> technique.
 - The email should be put on the <u>Answer</u> part of the <u>web interface</u> for this project



```
# Step 5: Generate an email to be sent to the customer
GoCodeo-Generate tests for the below function
def get_email(comment, subject, summary, sentiment):
    system_message_email = comment + subject + summary + sentiment
    user_message_email = f"""
    Please create an email to be sent to the customer based on {comment}, including the {subject}, {summary} and \
        {sentiment} with proper email format with subject and extra."""
    messages_email = [
        {'role': 'system',
         'content': system_message_email},
        {'role': 'user',
         'content': f"{delimiter}{user_message_email}{delimiter}"},
    email = get_completion_from_messages(messages_email)
    return email # Return the email without printing it
```

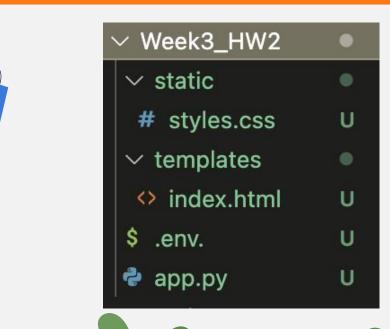
Run the Project - \$python3 app.y

You can go to http://127.0.0.1:5000/ to use the web interface!

```
@app.route('/', methods=['GET', 'POST'])
def index():
    comment = None
    email = None
    language = "English" # Initialize the language variable here
    if request.method == 'POST':
        language = request.form['language']
        comment = generate comment()
        subject = get_subject(comment)
        summary = get_summary(comment)
        sentiment = get_sentiment(comment)
        email = get_email(comment, subject, summary, sentiment)
        # Check if the user wants to translate the comment and email
        translate comment = 'translate-comment' in request.form
        translate_email = 'translate-email' in request.form
        if translate comment:
            comment = get_translation(comment, language)
        if translate email:
            email = get_translation(email, language)
    return render_template('index.html', comment=comment, email=email, language=language)
   __name__ == '__main__':
    app.run(debug=True)
```



FILES YOU NEED TO HAVE





INDEX.HTML FILE

```
<!DOCTYPE html>
<head>
   <title>Comment and Email Generator</title>
   <link rel="stylesheet" type="text/css" href="{{ url for('static', filename='styles.css') }}">
   <div class="container">
       <h1>Email to Customer</h1>
       <form method="POST">
           <label for="language">Select Language:</label>
           <select name="language" id="language" class="language-select">
               <option value="English">English</option>
               <option value="Spanish">Spanish</option>
               <option value="Chinese">Chinese</option>
               <option value="Japanese">Japanese
               <option value="Korean">Korean</option>
               <option value="French">French</option>
               <option value="German">German</option>
               <option value="Italian">Italian
               <option value="Hindi">Hindi</option>
               <option value="Arabic">Arabic</option>
               <option value="Telugu">Telugu</option>
               <!-- Add more language options as needed -->
```

```
<input type="submit" value="Generate" class="submit-button">
    <div class="translate-options">
       <label for="translate-comment">Translate Comment:</label>
       <input type="checkbox" name="translate-comment" id="translate-comment" class="translate-checkbox">
       <label for="translate-email">Translate Email:</label>
       <input type="checkbox" name="translate-email" id="translate-email" class="translate-checkbox">
<div class="result-container">
    {% if comment %}
    <div class="result-section">
       <div class="left-section">
           <h2>Comment:</h2>
           {{ comment }}
       <div class="right-section">
           <h2>Email:</h2>
           <div class="email-content">
               {{ email | safe }}
   </div>
    {% endif %}
```

STYLES.CSS FILE

```
background-color: ■#fdffc0; /* Lighter background */
   color: □#120c0c; /* Dark text color for better readability */
   font-family: Verdana, sans-serif;
   display: flex;
   flex-direction: column:
   align-items: center;
   height: 100vh;
   margin: 0;
/* Style the form and result div */
form {
   display: flex:
   flex-direction: column:
   align-items: center;
   font-size: 20px;
.container {
   margin: 0 auto;
   max-width: 800px;
   padding: 15px;
   background-color: #FFFFFF; /* White background for container */
   border-radius: 8px; /* Rounded edges */
   box-shadow: 0 2px 10px □ rqba(0, 0, 0, 0.1); /* Shadow for depth */
.result-container {
   margin-top: 15px;
   display: flex;
   flex-direction: column:
```

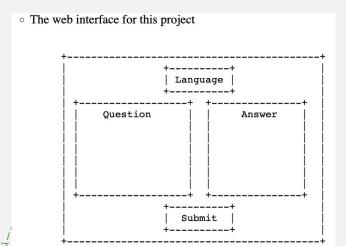
```
/* Style the result sections (comment and email) */
.result-section {
   display: flex;
   background-color: ■#ff2121; /* Darker yellow for sections */
   border: 1px solid ■#ff2121; /* Darker yellow border */
   margin-bottom: 20px;
.left-section,
.right-section {
   flex: 1;
   padding: 10px;
.left-section {
   background-color: ■#ff9626; /* Darker orange for left section */
.right-section {
   background-color: ■#ff9626; /* orange color for right section */
.result-section h2 {
   margin: 10px 0;
.result-section p {
   margin: 10px 0;
```





```
/* Style the language selection dropdown */
.language-select {
    font-size: 15px: /* Adjust the font size as needed */
    width: 100%; /* Adjust the width as needed */
    padding: 10px;
    margin-top: 10px;
    background-color: #ff9626; /* Darker Yellow for dropdown */
    border: none; /* Remove border */
    color: ■white; /* Text color */
    font-weight: bolder;
    font-size: 40px;
    margin: 0;
    text-align: center;
    color: ■#ff8214; /* Yellow color for title */
/* Style the submit button */
.submit-button {
    background-color: ■#ff8214; /* Darker blue for button */
    color: ■white; /* Text color */
    border: none; /* Remove button border */
    padding: 10px 20px; /* Adjust padding as needed */
    font-size: 15px; /* Adjust font size as needed */
    cursor: pointer:
    margin-top: 10px;
/* Style the submit button on hover */
.submit-button:hover {
    background-color: ■#ecff7e; /* Lighter blue on hover */
```

THE WEB INTERFACE



- Spec
 - Question
 - The result of <u>Step 1</u>
 - o Answer
 - The result of <u>Step 5</u>
 - o Language
 - The language of the Answer.
 - Test cases

ID	Question	Answer
1	English	English
2	English	Non-English
3	Non-English	English
4	Non-English	Non-English
		Note: ChatGPT can infer the language used in <u>Question</u> and then generate the <u>Answer</u> with the same language

ENGLISH <-> ENGLISH

Email to Customer

Select Language:

English

Generate

Translate Comment:

Translate Email:

Comment:

I am really impressed with the wide range of products available. From ultrabooks to gaming laptops, smartphones to home theater systems, and gaming consoles to audi reviews, and gaming console to audi reviews, and clineView offer high-quality products with great features and warranties. The ratings and reviews also indicate the satisfaction of customers. The prices are reasonable considering the features and performance of the products. Overall, I am excited to explore and choose the perfect product that meets my needs and preferences. We are proud to partner with operferences. We are proud to partner with

Email:

wide range of products! Dear [Customer's Name], I hope this email finds you well. I wanted to personally reach out and express my gratitude for your recent comment regarding our wide range of products. We are thrilled to hear that you are impressed with ultrabooks to gaming laptops, smartphones to home theater systems, and gaming consoles to audio equipment. At [Company Name], we preferences. We are proud to partner with brands like TechPro, BlueWave, SmartX, and CineView, who are known for their exceptional products, great features, and reliable warranties. Your positive feedback regarding their offerings reinforces our commitment to delivering the best possible products to our valued customers. We understand that choosing the perfect product can be a daunting task, but rest assured, our team is here to assist you every step of the way. Our website features detailed product descriptions, customer ratings, and reviews, which can help you make an informed decision. Additionally, our knowledgeable customer support team is available to answer any questions or provide further guidance. Furthermore, we believe in offering our products at reasonable prices, considering the features and performance they provide. We want to ensure that our customers receive the best value for their investment, and your acknowledgment of our pricing strategy is greatly appreciated. Once again, thank you for taking the time to share your positive experience with us. We are excited to have the opportunity to serve you and help you find the perfect product that meets your needs and preferences. Should you require any assistance or have any further inquiries, please do not hesitate to reach out to us. Best regards, [Your Name] [Your Title/Position] [Company Name] [Contact Information 1

ENGLISH <-> NON-ENGLISH (TELUGU)

Email to Customer

Select Language:

Generate

Translate Comment:

Translate Email:

Comment:

I am really impressed with the wide range of products available. From ultrabooks to gaming laptops, smartphones to home theater systems, and gaming consoles to audio equipment, there is something for everyone. The brands like TechPro, BlueWave, SmartX, and CineView offer high-quality products with great features and warranties. The ratings and reviews also indicate the satisfaction of customers. The prices are reasonable considering the features and performance of the products. Overall, I am excited to explore and choose the perfect product that meets my needs and preferences.

Email:

ప్రియమైన [గ్రాహకుడు పేరు], ఈ ఇమెయిల్ మీకు మంచిగా ఉందని ఆశిస్తున్నాను. మా విస్తృత ఉత్పత్తి వివరాలను గురించి మీ ఇంటరెస్ట్ కోసం మీకు ధన్యవాదాలు చెప్పడానికి ఈ ఇమెయిల్ రూపంలో మీకు చేయాలని ఆకాంక్షిస్తున్నాను. మేము మీకు అందిస్తున్న వివిధ విధానాలను గుర్తించి మీకు ఆకర్షించినట్లు చూపిస్తున్నాము, అందుబాటులో ఉన్నవి ఉల్ట్రాబుక్స్ నుండి గేమింగ్ ల్యాప్టటాప్లలకు, స్మార్ట్ఫోళ్లళలకు నుండి హోమ్ థియేటర్ సిస్టమ్ అక్కు గేమింగ్ కన్స్లోల్ కు నుండి ఆడియో సాధనాలకు వర్గాన్ని అందిస్తున్నాము. [కంపెనీ పేరు]లో, మేము మా గ్రాహకులకు అవసరమైన ఉత్పత్తులను అందిస్తున్నాము. మేము మా గురించి మీరు ఆకర్షించిన వివరా

(JAPANESE) NON-ENGLISH <-> ENGLISH

Email to Customer

Select Language:

Englis

Generate

Translate Comment:

Translate Email:

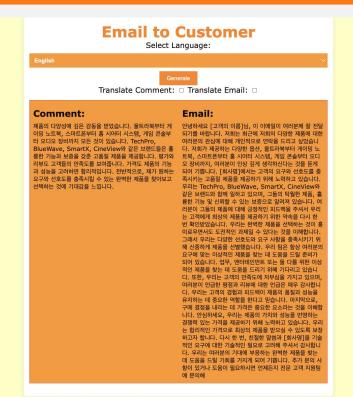
Comment:

幅広い製品のラインナップに本当に應銘を受けています。 ウルトラブックからゲーミングノートバソコン、スマートフックからホーシンアターシステム、ゲーム機からオーディオ機器まで、誰にでも合うものがあります。 TechPro、BueWave、SmartX、CineViewなどのブランドは、優れた機能と保証を構えた高島質な製品を提供しています。評価とレビューも観客の満足足を示しています。 個格も製品の機能と性能を考慮すれば各理的です。全体的に、自分のニーズと好みに合った完璧な製品を選ぶことができることにワクワクしています。

Email:

Subject: Exciting Product Range and Impressive Brands at Our Store! Dear [Customer's Name], I hope this email finds you well. I wanted to reach out and personally express my excitement about the wide range of products available at our store. From ultrabooks to gaming laptops, smartphones to home theater systems, and gaming consoles to audio equipment, we have something for everyone. I am particularly impressed with the high-quality products offered by brands like TechPro, BlueWave, SmartX, and CineView, These brands not only provide great features but also offer warranties to ensure your satisfaction. The positive ratings and reviews from our customers further validate the quality and performance of these products. What's even better is that our prices are reasonable, considering the exceptional features and performance of the products. We believe in providing value for money and ensuring that you get the best bang for your buck. I understand that choosing the perfect product can be overwhelming with such a wide selection. However, I assure you that our team is here to assist you in finding the product that meets your needs and preferences. Whether you are a tech enthusiast, a gaming aficionado, or an audio connoisseur, we have got you covered. So, I invite you to explore our store and discover the perfect product that will enhance your lifestyle. If you have any questions or need assistance, please do not hesitate to reach out to our knowledgeable and friendly staff. We are here to make your shopping experience enjoyable and hasslefree. Thank you for choosing us as your preferred destination for all your tech and entertainment needs. We look forward to serving you and exceeding your expectations. Best regards, [Your Name] [Your Position] [Your Store/Company Name] [Contact Information

NON-ENGLISH <-> NON-ENGLISH (KOREAN)



IN TERMINAL

Comment from customers:

I am really impressed with the wide range of products available. From ultrabooks to gaming laptops, smartpho nes to home theater systems, and gaming consoles to audio equipment, there is something for everyone. The br ands like TechPro, BlueWave, SmartX, and CineView offer high-quality products with great features and warran ties. The ratings and reviews also indicate the satisfaction of customers. The prices are reasonable considering the features and performance of the products. Overall, I am excited to explore and choose the perfect product that meets my needs and preferences.

Subject of customer comment:

Impressed with the wide range of products available.

Summary of customer comment:

The commenter is impressed with the wide range of products available, including laptops, smartphones, gaming consoles, and audio equipment. They mention brands like TechPro, BlueWave, SmartX, and CineView, and are excited to find a product that meets their needs.

Positive

Translation of customer comment summary in Korean: 제품의 다양성에 깊은 권동을 받았습니다. 울트라부부터 게이징 노트북, 스마트폰부터 홈 시어터 시스템, 게임 콘솔 부터 오디오 정비까지 모든 것이 있습니다. Rechiro, Blueklave, SmartX, CineViex와 같은 브랜드들은 훌륭한 기능과 보증을 갖춘 고공질 제품을 제공합니다. 평가와 리뷰도 고객들의 만족도를 보여줍니다. 가격도 제품의 기능과 성능 을 고려하면 합리적입니다. 전반적으로, 제가 원하는 요구와 신호도를 충족시킬 수 있는 완벽한 제품을 찾아보고 선택하는 것에 기관길을 느꼈니다.

Translation of customer comment summary in Korean: 안녕하세요 [고객의 이름]님,

이 이메일이 여러분께 잘 전달되기를 바랍니다. 저희는 최근에 저희의 다양한 제품에 대한 여러분의 관심에 대해 개 인적으로 연락을 드리고 싶었습니다. 저희가 제공하는 다양한 음선, 물로라복부터 게이밍 노트북, 스마트본부터 사이터 시스템, 게임 존솔부터 오디오 장비까지, 여러분이 인상 집계 생각하신다는 것을 듣게 되어 기쁨니다.

[회사명]에서는 고객의 요구와 선호도를 충족시키는 고종질 제품을 제공하기 위해 노력하고 있습니다. 우리는 TechFor, Bluekave, SmartX, CinetVise에 같은 브랜드와 함께 영하고 있으며, 그들의 막말한 제품, 홍류한 및 신뢰할 수 있는 보증으로 알려져 있습니다. 여러분이 그들의 제품에 대해 긍정적인 피드백을 주셔서 우리는 고객에게 최상의 제품을 제공하기 위한 약속을 다시 한 법 확인받았습니다.

우리는 완벽한 제품을 선택하는 것이 증매로우면서도 도전적인 관계일 수 있다는, 우리 아메합니다 그래서 우리는 우리는 완벽한 제품을 찾는데 도움을 가게 선택하게 되어 있습니다. 우리 등의 항상 아니라의 요구에 맛 는 이상적인 제품을 찾는데 도움을 모려고 있습니다. 업무, 엔터테인먼트 또는 둘 다를 위한 이상적인 제품을 가게 되었다면 모음을 드리기 위해 그들 관리가 있습니다.

또한 , 우리는 고객의 만족도에 자부심을 가지고 있으며 , 여러분이 언급한 평점과 리뷰에 대한 언급은 매우 감사합니다. 우리는 고객의 경험과 피드백이 제품의 품질과 성능을 유지하는 데 중요한 역할을 한다고 믿습니다.

마지막으로, 구매 결정을 내리는 데 가격은 중요한 요소라는 것을 이해합니다. 안심하세요, 우리는 제품의 가치와 성능을 반영하는 경쟁력 있는 가격을 제공하기 위해 노력하고 있습니다. 우리는 합리적인 가격으로 최상의 제품을 받으실 수 있도록 보장하고자 합니다. 다시 한 번,친절한 말씀과 [회사명]을 기술적인 요구에 대한 기술적인 필요로 고려해 주셔서 감사합니다.우리는 여러분의 기대에 부용하는 완벽한 제품을 찾는 데 도움을 드릴 기회를 가지게 되어 기쁩니다.추가 문의 사항이 있 거나 도움이 필요하시면 언제든지 전문 고객 지원팀에 문의해

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Thank You So Much!

LET ME KNOW IF YOU HAVE ANY QUESTIONS/SUGGESTIONS/FEEDBACK!

