Email Generation Project

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Introduction

The Email Generation Project is a comprehensive initiative designed to enhance email communication across various industries by leveraging the power of AI. Our team has divided email generation into two main parts to meet customer needs: one is the prompt, which generates high-quality emails based on customer requirements, and the other is the example, which enhances the completeness of existing emails. To achieve this, our team meticulously researched and gathered extensive real-world data from six distinct industries: Retail, Restaurant, Law Firm, CPA Firm, salon, and AI. We provided various types of outputs for each industry, including communication strategies, marketing tactics, services offered, customer engagement methods, and promotional activities.
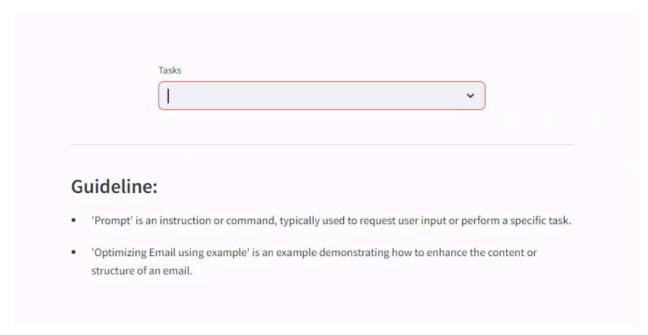
Our model incorporated key elements such as subject lines, salutations, and email formats (opening, body, and closing), resulting in more polished and complete emails. This approach ensures that each email is not only contextually appropriate but also professionally crafted. Additionally, we integrated functionality for users to upload various document types, including Excel, text, and CSV files, allowing customers to handle multiple emails simultaneously and improve efficiency. Our system also checks for the presence of five crucial components: Theme, Location, Time, Requirements, and Benefits, ensuring that the email content is comprehensive and informative.

The project also addresses the style of the email, allowing users to choose between formal and informal tones based on the context and recipient. Moreover, users can view the history of different outputs, providing them with options to select the most suitable one for their needs.

Besides, we provide scores for customers, allowing them to see how their generated emails improve in quality.
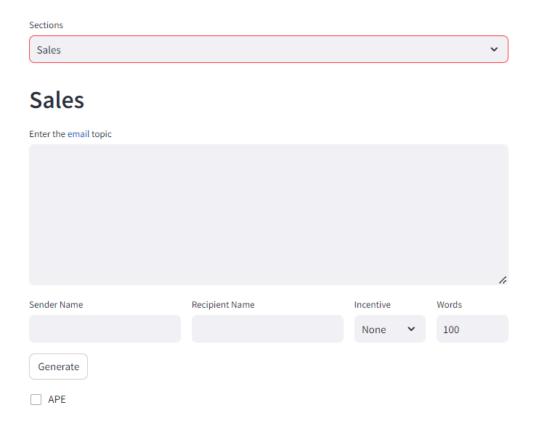
In summary, the Email Generation Project combines extensive industry research, advanced AI modeling, and user-centric features to deliver a powerful tool for generating high-quality emails tailored to various professional contexts.

Home Page

Tasks

| |

Guideline:

- 'Prompt' is an instruction or command, typically used to request user input or perform a specific task.

- 'Optimizing Email using example' is an example demonstrating how to enhance the content or structure of an email.

There is a dropdown menu labeled "Tasks" at the top. The dropdown menu is empty, indicating that the user can select a specific task from the list. We can choose 'prompt' and 'example'.

Part 1: Prompt

Interface Components:

- **Sections Dropdown:**

Users can select the industry or section relevant to their email, we give six different industries and other sections. In the image, the selected section is "Sales." If the desired industry is not listed, users can select "Others."

- **Email Topic Input:**

Users can enter the specific topic or subject of the email they want to generate. This helps in tailoring the email content to the user's needs.

- **Sender Name and Recipient Name:**

Users can input the names of the sender and recipient. This personalization helps in creating a more engaging and relevant email.

- **Incentive Dropdown:**

Users can select an incentive to include in the email, such as discounts or special offers(it depends on our research about different email types). This feature helps in enhancing the email's effectiveness in driving engagement.
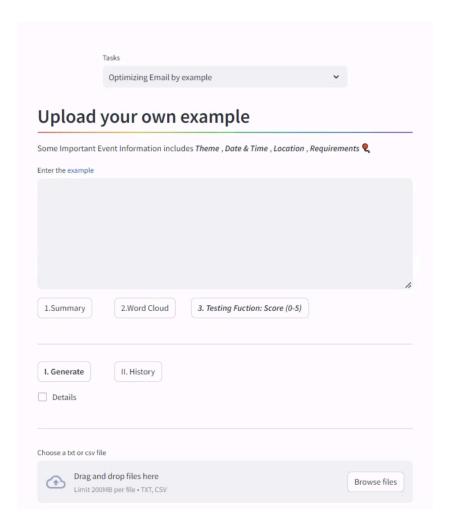
- **Word Count Selector:**

Users can specify the desired length of the email in words. This ensures that the email meets specific length requirements.
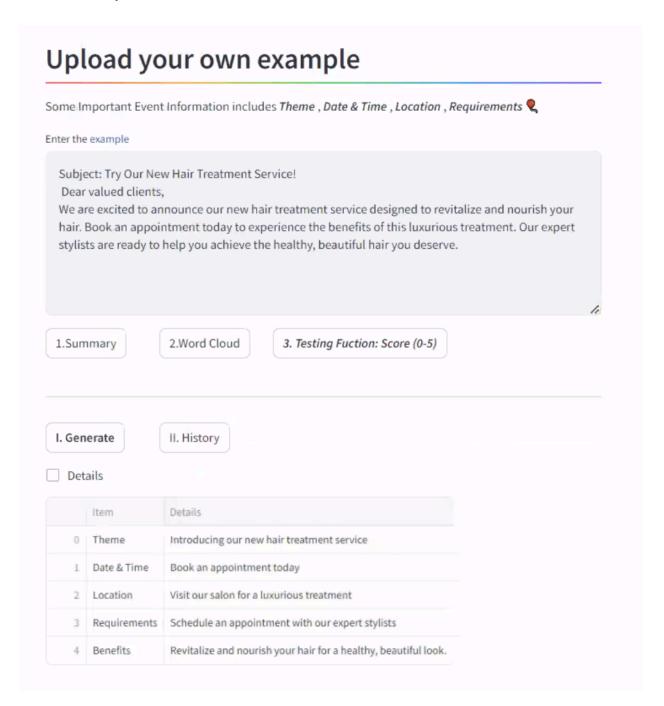
- Generate Button:

Once all the necessary fields are filled out, users can click the "Generate" button to create the email.

Part 2: Upload Your Example

2.1 Summary

Upload your own example

Some Important Event Information includes *Theme , Date & Time , Location , Requirements* 🎈

Enter the example

> Subject: Try Our New Hair Treatment Service!
> Dear valued clients,
> We are excited to announce our new hair treatment service designed to revitalize and nourish your hair. Book an appointment today to experience the benefits of this luxurious treatment. Our expert stylists are ready to help you achieve the healthy, beautiful hair you deserve.

| 1.Summary | 2.Word Cloud | 3. Testing Fuction: Score (0-5) |

| I. Generate | II. History |

☐ Details

	Item	Details
0	Theme	Introducing our new hair treatment service
1	Date & Time	Book an appointment today
2	Location	Visit our salon for a luxurious treatment
3	Requirements	Schedule an appointment with our expert stylists
4	Benefits	Revitalize and nourish your hair for a healthy, beautiful look.

Input:

The user provides an example text describing an event. This text includes various details about the event such as the theme, date & time, location, requirements, and benefits.

Processing:

The system analyzes the provided text to identify the presence of specific components (Theme, Date & Time, Location, Requirements, and Benefits).
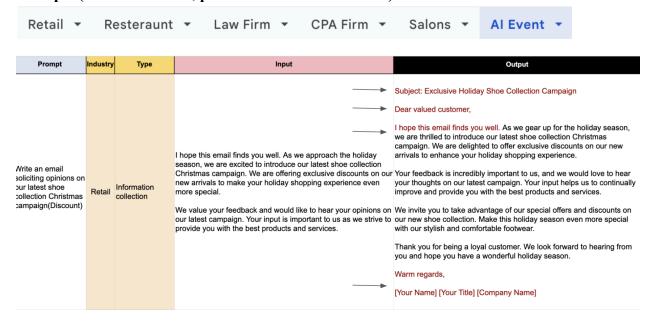
Output:

The system generates a summary table that indicates whether each of these components is present in the input text. Each row in the table corresponds to a different component, with keywords in the "Details" column to show if that component was found.

This system helps users quickly determine if their event descriptions include all necessary components and provides feedback on what is missing.

2.2 Improve email integrity

Example (for more details, please refer to the Excel file)

				Retail	Resteraunt	Law Firm	CPA Firm	Salons	AI Event

Prompt	Industry	Type	Input	Output
Write an email soliciting opinions on our latest shoe collection Christmas campaign(Discount)	Retail	Information collection	I hope this email finds you well. As we approach the holiday season, we are excited to introduce our latest shoe collection Christmas campaign. We are offering exclusive discounts on our new arrivals to make your holiday shopping experience even more special. We value your feedback and would like to hear your opinions on our latest campaign. Your input is important to us as we strive to provide you with the best products and services.	Subject: Exclusive Holiday Shoe Collection Campaign Dear valued customer, I hope this email finds you well. As we gear up for the holiday season, we are thrilled to introduce our latest shoe collection Christmas campaign. We are delighted to offer exclusive discounts on our new arrivals to enhance your holiday shopping experience. Your feedback is incredibly important to us, and we would love to hear your thoughts on our latest campaign. Your input helps us to continually improve and provide you with the best products and services. We invite you to take advantage of our special offers and discounts on our new shoe collection. Make this holiday season even more special with our stylish and comfortable footwear. Thank you for being a loyal customer. We look forward to hearing from you and hope you have a wonderful holiday season. Warm regards, [Your Name] [Your Title] [Company Name]

User Input:

The user provides a prompt, specifying the type of email they want to generate. For example, "Write an email soliciting opinions on our latest shoe collection Christmas campaign (Discount)."

The user selects the industry (e.g., Retail) and the type of email (e.g., Information collection).

The user inputs specific content that includes details they want to be included in the email.

System Processing:

The system uses the provided prompt, industry, type, and input content to generate a tailored email. It incorporates essential elements such as subject lines, salutations, and structured email format (opening, body, and closing).

The system ensures the email is polished and complete, using predefined templates and AI algorithms to refine the language and structure.

Generated Output:

The system outputs a fully formatted email. This email includes a clear subject line, a professional salutation, a well-structured body, and an appropriate closing.

The email addresses the prompt by including relevant information and calls to action, tailored to the specific industry and purpose.

2.3 Show History

show history

```
▼ {
    ▼ "improvements" : [
        0 :
        "Subject: Join Us for Our Customer Appreciation Event!

        Dear valued clients,

        We are thrilled to invite you to our upcoming customer appreciation event,
        where we will be offering complimentary services and refreshments as a
        token of our gratitude for your loyalty. This is an opportunity for us to
        pamper you and celebrate our partnership.

        Theme: Customer Appreciation
        Date: [Date of the Event]
        Location: [Venue Name]
        Requirements: Please RSVP to secure your spot
        Benefits: Enjoy complimentary services and refreshments

        Please RSVP at your earliest convenience to ensure we reserve a spot for
        you at this special event. We are looking forward to celebrating with you
        and showing our appreciation for your continued support.

        Warm regards,

        [Your Name]
        [Your Title]
        [Your Company Name]"
```

The image shows a generated email example with the functionality to show the history of different versions of the email. This feature is useful for users who may have evolving requirements and need to see and choose from various versions of the generated emails.

Functionality:

The "Show History" button allows users to view different ver

Tools and Technologies Used:

NLP: For understanding and generating text based on user input.

Database: To store and manage different versions of generated emails.

UI: To allow users to input data, generate emails, and view history.

AI Algorithms: To refine and polish the generated email content.

The Email Generation Project, with its history tracking feature, allows users to generate and refine emails tailored to their specific needs. By providing detailed input, users can generate high-quality emails, and with the ability to view and compare different versions, they can ensure that the final email is the best fit for their requirements. This system combines AI technology, user-friendly interfaces, and robust data management to deliver a powerful tool for professional email communication.

2.4 Word Could

User Input:

The user enters the email content in the text box provided. This content typically includes various details about the event or communication they wish to send out.

System Processing:

The system processes the email content to identify and count the frequency of each word. Common words (e.g., "the," "and," "is") are usually filtered out to focus on the more significant terms.

The system then generates a word cloud based on the frequency of the remaining words.

Generated Output:

The word cloud is displayed visually, with more frequently used words appearing larger and less frequently used words appearing smaller. This helps users quickly identify the main themes and important terms in their email content.

2.5 Socre(testing stage)

We will follow three standards to score the quality of an email:

1. **Checking the Five Sections**:
   - Ensure the email includes Theme, Location, Time, Requirement, and Benefits. For emails lacking Time and Location, we will apply different standards.
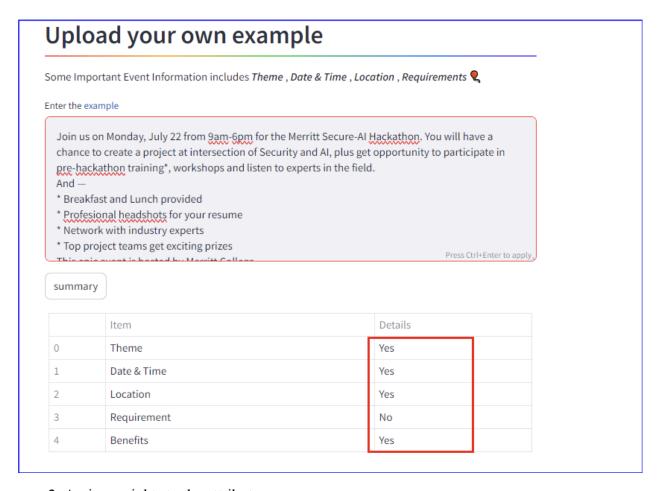
2. **Analyzing Sentiment**:
   - Check the percentage of Positive, Neutral, and Negative words. We assume that if the email contains more than 80% positive words, the receiver is more likely to read it.
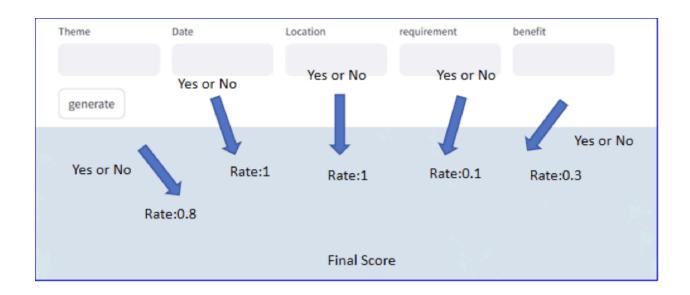
3. **Evaluating the Use of Subtitles**:

   ○ Check whether the subtitles use strong subjective language.

So far, we have almost completed the first step: checking the sections. The process is as follows:

1. Judge Yes or No for the presence of each section.

Upload your own example

Some Important Event Information includes *Theme* , *Date & Time* , *Location* , *Requirements* 📍

Enter the example

Join us on Monday, July 22 from 9am-6pm for the Merritt Secure-AI Hackathon. You will have a chance to create a project at intersection of Security and AI, plus get opportunity to participate in pre-hackathon training*, workshops and listen to experts in the field.
And —
* Breakfast and Lunch provided
* Profesional headshots for your resume
* Network with industry experts
* Top project teams get exciting prizes
~~This epic event is hosted by Merritt College~~

Press Ctrl+Enter to apply

summary

	Item	Details
0	Theme	Yes
1	Date & Time	Yes
2	Location	Yes
3	Requirement	No
4	Benefits	Yes

2. Assign weights to the attributes.

3. Add up the scores to get a preliminary score.

Firstly, we calculate the percentage when the total score equals five. After obtaining these values, we can determine the score using a linear regression function."

SCORE	QUALITY
4-5	PERFECT
2-4	GOOD
<2	BAD