

AI G-Mail Generator: Project Documentation

Ideation

Background & Motivation

In today's fast-paced professional world, crafting well-structured, personalized emails repeatedly is a time-consuming task. Whether in business communication, event coordination, or internal messaging, professionals often find themselves repeating similar structures and language across multiple emails. This repetitive nature makes email generation an ideal candidate for automation using modern AI models.

Primary Goal

Our project is fundamentally designed to fulfill three key scenarios of email generation:

1. Personalized Email Generation
2. Efficient Communication
3. Streamlined Workflow

These requirements guided our ideation and development process from the very beginning.

Initial Approach and Challenges

Initially, we explored using various open-source GPT-Neo models to handle the text generation. However, we encountered a significant issue: hallucinations. GPT-Neo, while powerful, often generated text that was inaccurate, factually incorrect, or inconsistent with the user's input. This severely impacted the reliability of the generated emails.

Pivot to Gemini

To resolve this, we shifted our strategy to use Google's Gemini (Generative AI) model. Gemini

offered a much higher quality of output, better contextual understanding, and more coherent, relevant email content. This decision dramatically improved the usability and professionalism of the generated emails.

Problem Statement

Manual email composition results in significant time loss, especially in bulk communication scenarios. Most existing tools provide templates or standard responses but lack adaptability, tone sensitivity, and context awareness. Our goal is to create an AI-powered system that takes specific user inputs and returns a customized, professional email output that is contextually relevant and well-structured.

Target Users

The primary users of this system include:

- Professionals in corporate settings
- Event planners
- HR departments
- Small businesses
- Students and educators looking for well-drafted communication

Innovation

Unlike fixed-template email tools, our solution generates content dynamically with AI, based on real-time input. This brings a higher degree of personalization and efficiency to the table.