

# **Project Title**

## **Flavour Fusion: AI-Driven Recipe Blogging Using Google Gemini**

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**Internship Program:** Google Cloud Generative AI – SmartInternz

### **Abstract:**

Flavour Fusion is an AI-powered web application developed using Streamlit and Google Gemini API. The application automatically generates structured recipe blogs based on user input. Users can provide a recipe topic and desired word count, and the system generates a detailed blog including title, ingredients, cooking instructions, tips, and serving suggestions.

This project demonstrates the practical implementation of Generative AI using Large Language Models (LLMs) in real-world applications. It reduces content creation time and enhances creativity for food bloggers and content creators.

### **Introduction:**

Generative AI is transforming content creation by enabling machines to generate human-like text, images, and code. Large Language Models (LLMs) such as Google Gemini allow developers to build intelligent applications that produce high-quality content.

Flavour Fusion integrates Google Gemini with Streamlit to create an automated recipe blogging platform. The project demonstrates how cloud-based AI services can be integrated into web applications efficiently.

### **Problem Statement:**

Food bloggers and content creators spend significant time writing structured recipe blogs. Manual content creation is time-consuming and requires creativity and consistency.

There is a need for an AI-powered system that:

- Automatically generates structured recipe blogs
- Allows customization of content length
- Provides formatted output ready for publishing

## Objectives:

- Integrate Google Gemini API into a Python application
- Generate structured recipe blog content dynamically
- Allow user-defined word count customization
- Provide interactive UI using Streamlit
- Implement download functionality for generated content

## Technology Stack:

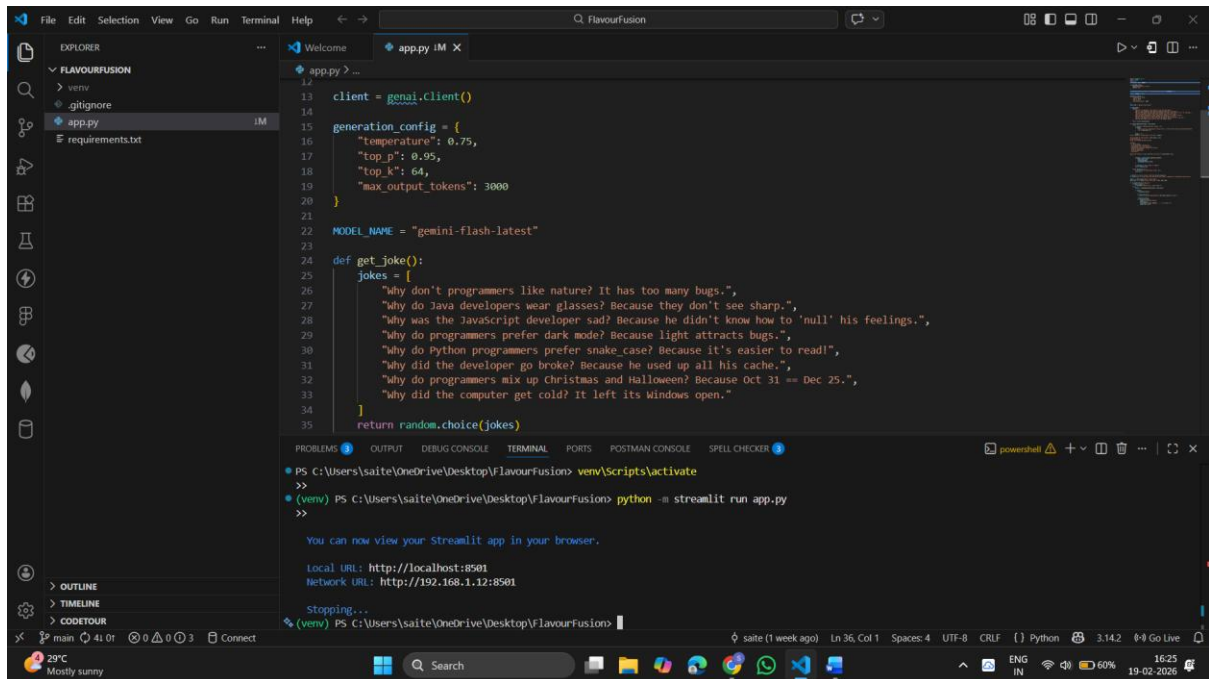
Component	Technology Used
Programming Language	Python
Frontend	Streamlit
AI Model	Google Gemini
API	Google Generative AI SDK
Version Control	Git & GitHub

## System Architecture:

### Workflow:

1. User enters recipe topic.
2. User selects desired word count.
3. Prompt is generated dynamically.
4. Prompt is sent to Google Gemini API.
5. Model generates structured blog content.
6. Content is displayed in Streamlit UI.
7. User can download the generated blog.

# Implementation:



The screenshot shows the VS Code editor with the `app.py` file open. The file contains the following code:

```
12 client = genai.Client()
13
14
15 generation_config = {
16     "temperature": 0.75,
17     "top_p": 0.95,
18     "top_k": 64,
19     "max_output_tokens": 3000
20 }
21
22 MODEL_NAME = "gemini-flash-latest"
23
24 def get_joke():
25     jokes = [
26         "Why don't programmers like nature? It has too many bugs.",
27         "Why do Java developers wear glasses? Because they don't see sharp.",
28         "Why was the JavaScript developer sad? Because he didn't know how to 'null' his feelings.",
29         "Why do programmers prefer dark mode? Because light attracts bugs.",
30         "Why do Python programmers prefer snake case? Because it's easier to read!",
31         "Why did the developer go broke? Because he used up all his cache.",
32         "Why do programmers mix up Christmas and Halloween? Because Oct 31 == Dec 25.",
33         "Why did the computer get cold? It left its Windows open."
34     ]
35     return random.choice(jokes)
```

The terminal output shows the following commands and results:

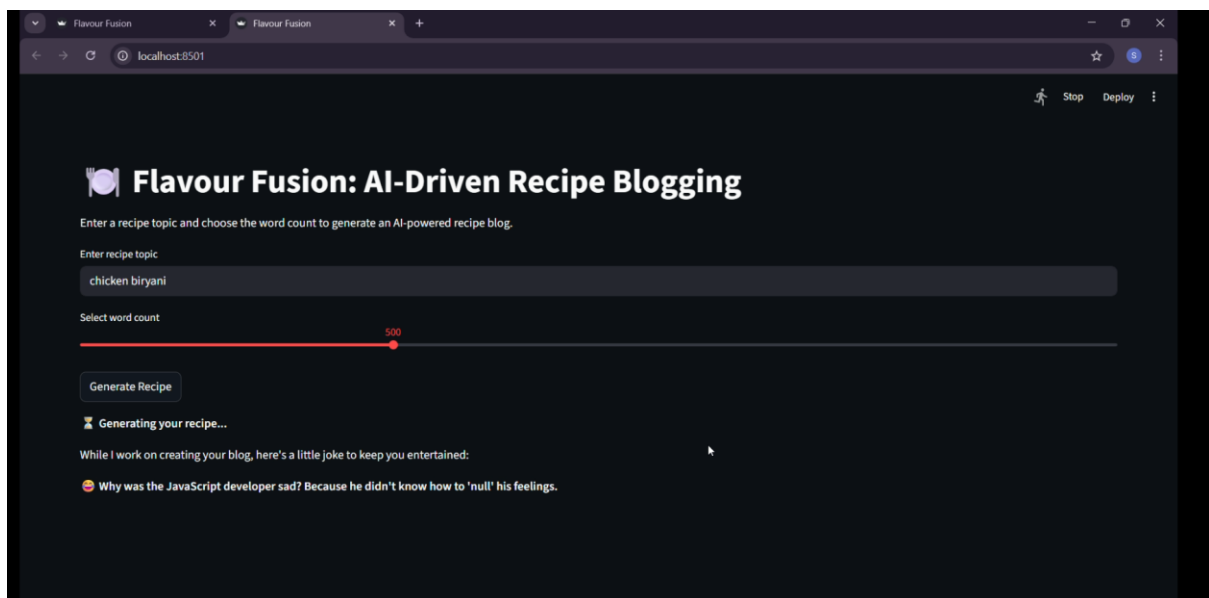
```
PS C:\Users\saitel\OneDrive\Desktop\FlavourFusion> venv\Scripts\activate
>>
(venv) PS C:\Users\saitel\OneDrive\Desktop\FlavourFusion> python -m streamlit run app.py
>>

You can now view your Streamlit app in your browser.

Local URL: http://localhost:8501
Network URL: http://192.168.1.12:8501

Stopping...
(venv) PS C:\Users\saitel\OneDrive\Desktop\FlavourFusion>
```

# Output :



While I work on creating your blog, here's a little joke to keep you entertained:

😄 Why was the JavaScript developer sad? Because he didn't know how to 'null' his feelings.

🍴 Your recipe is ready!

# The Ultimate Aromatic Chicken Biryani: A Step-by-Step Guide to Perfection

There is perhaps no dish in the world that commands as much reverence and love as a perfectly cooked Chicken Biryani. Originating from the royal kitchens of the Mughal Empire, this dish is a harmonious marriage of succulent chicken, fragrant long-grain Basmati rice, and a complex symphony of spices. A true Biryani is not just a meal; it is an experience that begins with the intoxicating aroma of saffron and cardamom and ends with the melt-in-your-mouth texture of slow-cooked meat. Whether it is a festive celebration, a wedding, or a cozy Sunday family dinner, Biryani stands as the undisputed king of the table.

The secret to a spectacular Biryani lies in the technique of "Dum" cooking—a process where the pot is sealed and the ingrediehts are allowed to steam in their own juices. This ensures that every grain of rice absorbs the essence of the spices and the richness of the chicken. While it may seem intimidating to beginners, mastering the art of Biryani is incredibly rewarding. In this guide, we will break down the process into manageable steps to help you achieve restaurant-quality results in your own kitchen.

## Ingredients

For the Chicken Marination:

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- 500g Chicken (bone-in pieces preferred for better flavor)
- 1 cup Thick Greek yogurt (curd)
- 2 tbsp Ginger-garlic paste
- 1 tsp Turmeric powder
- 1.5 tbsp Kashmiri red chili powder
- 1 tbsp Biryani Masala (homemade or store-bought)
- 1/2 cup Fresh mint leaves, chopped
- 1/2 cup Fresh coriander leaves, chopped
- 2 tbsp Lemon juice
- Salt to taste

For the Rice:

- 2 cups Extra-long grain Basmati rice (soaked for 30 minutes)
- 2 Cinnamon sticks, 4 Green cardamoms, 4 Cloves, 1 Star anise
- 1 tsp Caraway seeds (Shahi Jeera)
- 2 tbsp Salt (the water should taste like the sea)

5. **The Dum Cooking:** Seal the pot tightly. You can use a piece of aluminum foil or a dough seal (made of flour and water) around the lid to prevent steam from escaping. Place the pot on a heavy tawa (griddle) to ensure even heat distribution. Cook on low heat for 20–25 minutes. Once done, turn off the heat and let it rest for another 10 minutes before opening.

## Tips and Variations

- **The Rice Quality:** Always use aged Basmati rice. The older the rice, the less sticky it will be, resulting in distinct, fluffy grains.
- **Potato Addition:** If you enjoy Kolkata-style biryani, add large, halved boiled potatoes to the chicken layer.
- **Vegetarian Version:** Replace chicken with cauliflower, paneer, beans, and carrots, following the same marination process.

## Serving Suggestions

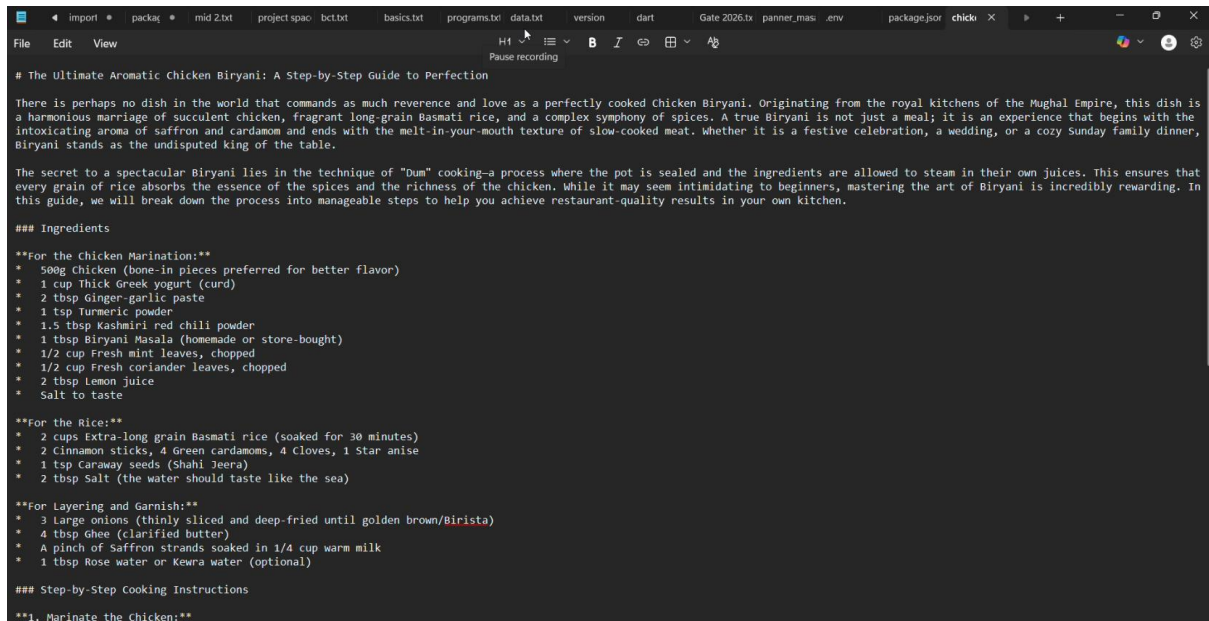
Chicken Biryani is best served piping hot. Pair it with a cool **Cucumber Raita** (yogurt dip) to balance the heat of the spices. A side of **Mirchi ka Salan** (a spicy peanut and chili gravy) and a fresh green salad with sliced red onions and lemon wedges will complete the royal feast.

## Conclusion ↗

Cooking a Chicken Biryani is a labor of love that requires patience, but the result is a culinary masterpiece that never fails to impress. By following the "Dum" method and using high-quality spices, you can bring the authentic flavors of India right into your home. Don't be afraid to experiment with the spice levels to suit your palate. Happy cooking!

Generated approximately 871 words.

📄 Download Recipe

A screenshot of a code editor window with a dark theme. The editor displays a recipe for 'The Ultimate Aromatic Chicken Biryani: A Step-by-Step Guide to Perfection'. The text is formatted with comments and lists. The recipe includes an introduction, a description of the 'Dum' cooking technique, a list of ingredients for the chicken marinade, rice, and layering/garnish, and a section for step-by-step cooking instructions. The first step is 'Marinate the Chicken'.

```
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* 1 tsp Caraway seeds (Shahi Jeera)
* 2 tbsp Salt (the water should taste like the sea)

**For Layering and Garnish:**
* 3 Large onions (thinly sliced and deep-fried until golden brown/Birista)
* 4 tbsp Ghee (clarified butter)
* A pinch of Saffron strands soaked in 1/4 cup warm milk
* 1 tbsp Rose water or Kewra water (optional)

### Step-by-Step Cooking Instructions

**1. Marinate the Chicken:
```

## Features:

- AI-based recipe generation
- Word count customization
- Professional structured output
- Download option
- Interactive UI
- Joke display during generation

## Results:

The system successfully generates structured recipe blogs of customizable length. The integration of Generative AI demonstrates real-world application of LLMs in content creation.

## Conclusion:

Flavour Fusion successfully demonstrates the integration of Generative AI with web applications. The project highlights the practical use of Google Gemini API for automated content creation and showcases how LLMs can enhance productivity and creativity.