

**The Superior University**

**📝 Programing for Ai Project Documentation**

**1. Project Title**

Smart Recipe Generator

**2. Project Overview**

Smart Recipe Generator is a Flask web app that takes user-input ingredients and uses a generative AI model (LLaMA via Together API) to generate creative, step-by-step recipes. It supports modern UI and handles long-format outputs gracefully.

**3. Core Features**

* Users input a list of ingredients.
* Uses LLaMA AI (via Together.xyz API) to generate:
* A dish name
* List of ingredients
* Step-by-step instructions
* Displays results in a styled, responsive UI.
* "Generate Another" button for new recipe ideas.

**4.Tools and Technologies Used**

| **Component** | **Tech Used** |
| --- | --- |
| Backend | Python (Flask) |
| Frontend | HTML, CSS |
| API Model | LLaMA 7B (via Together API) |
| Hosting/Testing | Localhost |

1. **SQL Concepts Used**

smart-recipe-generator/

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├── static/

│ └── style.css # Main stylesheet for the web UI

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├── templates/

│ ├── index.html # Main UI page

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├── app.py # Flask backend server

├── .env # Stores API key (optional but recommended)

├── requirements.txt # Python dependencies

└── README.md # GitHub documentation

1. **How It Works**

#### 🔸 app.py (Flask Backend):

Renders index.html on root URL.

On form submission:

Captures input ingredients.

Sends a request to the LLaMA model hosted via [Together.xyz](https://www.together.xyz/" \t "_new).

Processes the AI response and returns it to the UI.

#### 🔸 index.html (Frontend):

Contains a form for entering ingredients.

Displays a loading spinner while the AI generates the recipe.

Shows recipe inside a styled <pre> block to preserve formatting.

#### 🔸 style.css:

Custom styles for dark mode, centered UI, neon buttons, and responsive layout.

Handles long text wrapping in <pre> blocks to avoid overflow.

**7.Future Improvements**

Add user authentication and save generated recipes.

· Let users rate or save recipes.

· Add image generation using GenAI.

· Enable calorie/nutrition tracking.

· Add speech-to-text input.