

Project Name: Marketing Content Generator

Introduction:-

We developed an AI-powered Marketing Content Generator. This application uses Generative AI to transform a simple topic into professional marketing content based on the selected platform and tone.

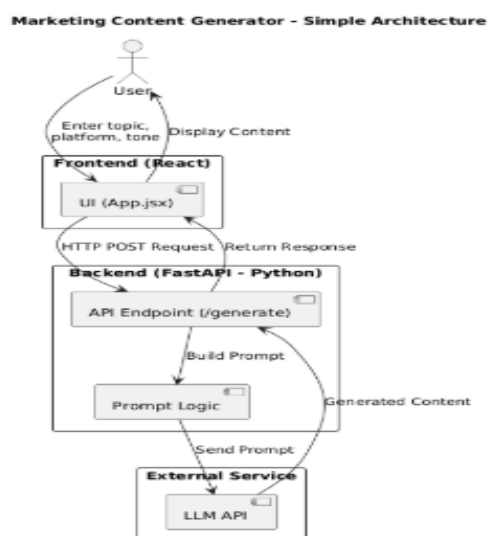
This application takes a basic topic from the user, along with platform and tone preferences, and generates professional marketing content instantly using Generative AI.

System Architecture:-

The system has three main components:

1. Frontend (React) – User enters topic, platform, and tone.
2. Backend (Python FastAPI) – Handles request processing and prompt engineering.
3. LLM API – Generates high-quality marketing content.

The backend sends a structured prompt to the LLM and returns formatted content to the frontend.



Sequence Diagram:-

Step 1: User Interaction

First, the user enters the topic, platform, and tone in the React frontend.

Step 2: Frontend Sends Request

When the user clicks "Generate Content", the frontend sends an HTTP POST request to the backend API endpoint

Step 3: Backend Processing

The FastAPI backend receives the request and builds a structured prompt using prompt engineering techniques.

Step 4: LLM API Call

The backend then sends this structured prompt to the LLM API to generate marketing content.

Step 5: Response From LLM

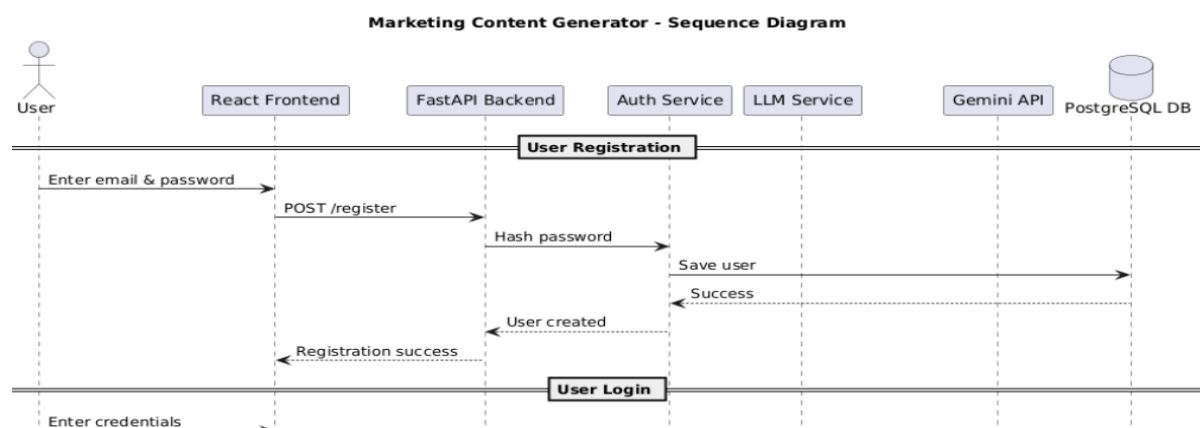
The LLM processes the prompt and returns the generated content back to the backend.

Step 6: Backend Returns Response

The backend sends the generated content back to the frontend.

Step 7: Display to User

Finally, the frontend displays the formatted content to the user.



Data Flow Diagram:-

Step 1: User Input

The user enters topic, platform, and tone in the frontend.

Step 2: Request to Backend

The frontend sends this data to the backend using an API request.

Step 3: Prompt Creation

The backend converts this input into a structured prompt.

Step 4: LLM Processing

The prompt is sent to the LLM API, which generates marketing content.

Step 5: Response

The generated content is returned to the backend, then to the frontend, and displayed to the user.

Marketing Content Generator - Data Flow Diagram (Level 1)

