## Sustainable Smart City Assistant Using IBM Granite LLM

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### Project Name: Sustainable Smart City Assistant Using IBM Granite LLM

**1.Importing Libraries:**

**Importing necessary libraries such as Gradio, PyTorch, and Transformers.**

**2. Loading Model and Tokenizer:**

**Loading the IBM Granite model and tokenizer.**

**3. Defining Functions:**

**Defining functions for generating responses, extracting text from PDFs, and summarizing policies.**

**4. Creating Gradio Interface:**

**Creating a Gradio interface for user interaction.**

**Functionsgenerate\_response-**

**Purpose: Generates a response based on a given prompt.**

**Parameters: prompt, max\_length.**

**Returns: Response generated by the model.**

**Extract\_text\_from\_pdf-**

**Purpose: Extracts text from a PDF file.**

**Parameters: pdf\_file.**

**Returns: Extracted text.**

**Eco\_tips\_generator**

**Purpose: Generates eco-friendly tips based on a given problem or keyword.**

**Parameters: problem\_keywords.**

**Returns: Eco-friendly tips.**

**Policy\_summarization**

**Purpose: Summarizes a policy document and extracts key points.**

**Parameters: pdf\_file, policy\_text.**

**Returns: Policy summary.**

**Gradio InterfaceThe Gradio interface provides a user-friendly way to interact with the Eco Assistant & Policy Analyzer. It includes two tabs:**

**1. Eco Tips Generator: Generates eco-friendly tips based on a given problem or keyword.**

**2. Policy Summarization: Summarizes a policy document and extracts key points.**