

# Project Documentation

## 1. Introduction

- Project Title: Eco Assistant & Policy Analyzer
- Team Members: K.Gajendran

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## 2. Project Overview

Purpose: The purpose of the Eco Assistant & Policy Analyzer is to provide citizens and city officials with sustainable living guidance and policy insights. It generates eco tips based on environmental keywords and summarizes lengthy government documents into concise, actionable summaries.

Feature	Key Point	Functionality
Eco Tips Generator	Personalized sustainability advice	Recommends eco-friendly daily actions based on keywords
Policy Summarization	Simplified policy understanding	Converts long documents into concise summaries
User-Friendly UI	Interactive design	Provides a Gradio-based dashboard with multiple tabs

## 3. Architecture

The frontend is built with Gradio, offering a clean and interactive web UI. The backend is powered by FastAPI for handling eco tips generation and policy summarization. LLM models are used for natural language understanding and text generation.

## 4. Setup Instructions

Prerequisites: Python 3.9 or later, pip, API keys for model access. Installation: • Clone the repository • Install dependencies from requirements.txt • Run the backend server using FastAPI • Launch the frontend via Gradio

## 5. Running the Application

➤ Start the FastAPI backend server ➤ Run the Gradio frontend ➤ Enter environmental keywords to generate eco tips ➤ Upload and summarize policy documents

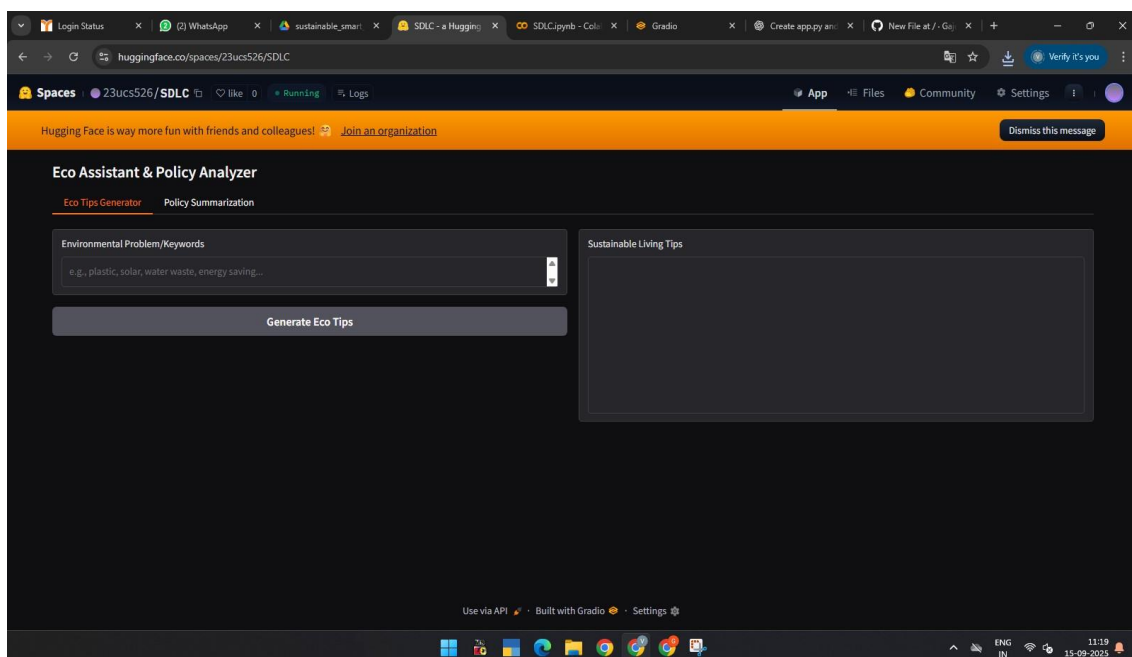
## 6. User Interface

The interface consists of two main tabs: 1. Eco Tips Generator – Users can input environmental problems or keywords and receive sustainability tips. 2. Policy Summarization – Allows uploading government/policy documents for simplified summaries. The UI is designed to be minimalist and user-friendly, focusing on accessibility for all users.

## 7. Future Enhancements

- Integration with external APIs for real-time data.
- Advanced forecasting of environmental trends.
- Enhanced authentication and user roles.
- Deployment on cloud platforms for scalability.

## 8. Screenshots



<https://gajendrank2006.github.io/SDLC/>