Ocean Poem Generator — Project Documentation

1. Project Overview

The **Ocean Poem Generator** is a simple web application built using Streamlit and the Hugging Face Transformers library. It generates poetic text based on user input prompts by leveraging a pretrained text generation model (bigscience/bloom-560m). This app provides a creative interface where users can enter prompts and receive generated poems, focusing here on ocean-themed poetry by default.

2. Features

- User-friendly web interface with Streamlit.
- Text generation powered by the bigscience/bloom-560m language model.
- Prompt input area with a default suggestion to write ocean-related poems.
- Caching of the model loading to optimize response times.
- Display of generated poem in a clear, readable format.

3. How It Works

1. The app loads the bigscience/bloom-560m model once and caches it for efficient reuse.
2. User enters a prompt in the text area.
3. When the "Generate Poem" button is clicked, the prompt is sent to the model to generate a poem.
4. The generated text is displayed under the prompt in a markdown block.

Install dependencies:

```bash
pip install streamlit transformers
```

Run:

```bash
streamlit run app.py
```

4. Usage Instructions

1. Open the web app in your browser (usually at `http://localhost:8501`).
2. Enter a text prompt or use the default prompt provided.
3. Click the "Generate Poem" button.
4. Wait a moment while the poem is generated.
5. View the generated poem below the button.

5. Code Explanation

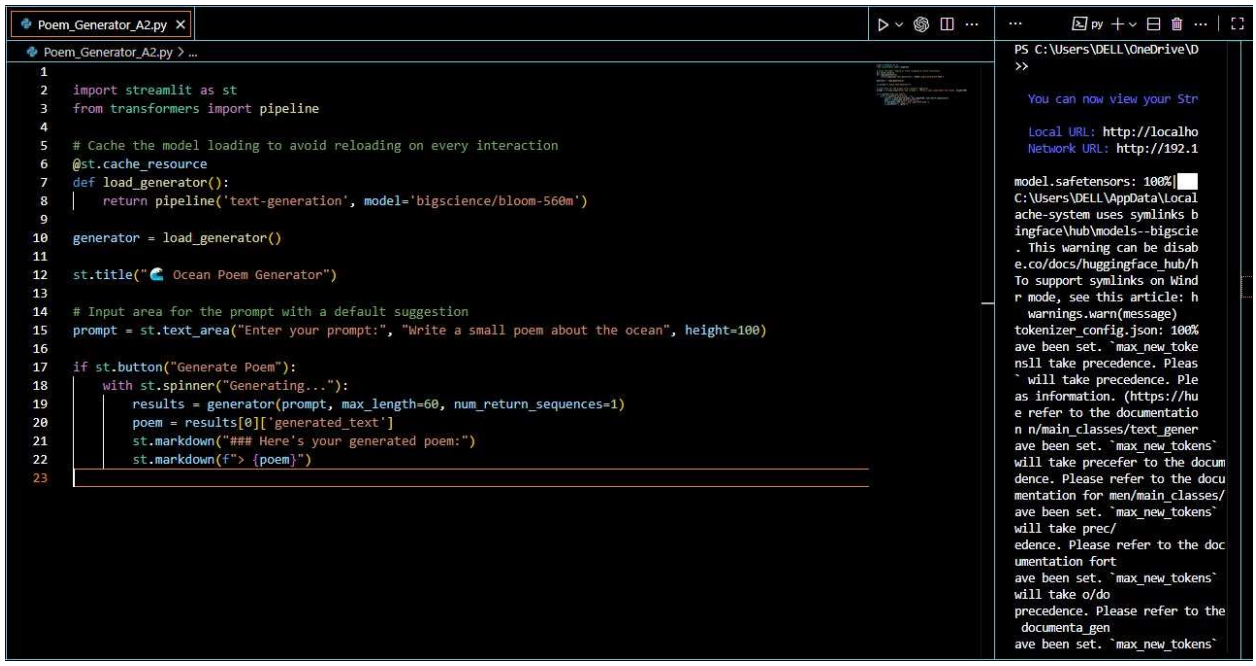

Fig1: Input Snapshot

- load_generator() loads the Bloom model and caches it using Streamlit's @st.cache_resource decorator.
- The app UI consists of a title, a text area for user input, and a button to generate the poem.
- When the button is clicked, the text generation pipeline is called with the user prompt.
- The generated poem is extracted and displayed using markdown.

6. Output Snapshots

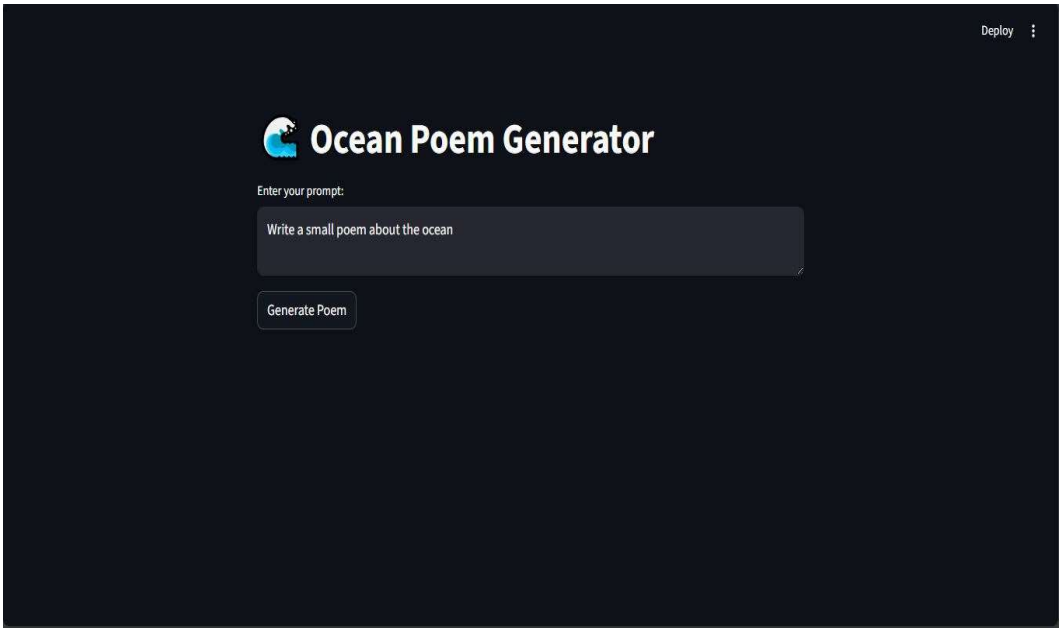

Fig2: Output Snapshot 1

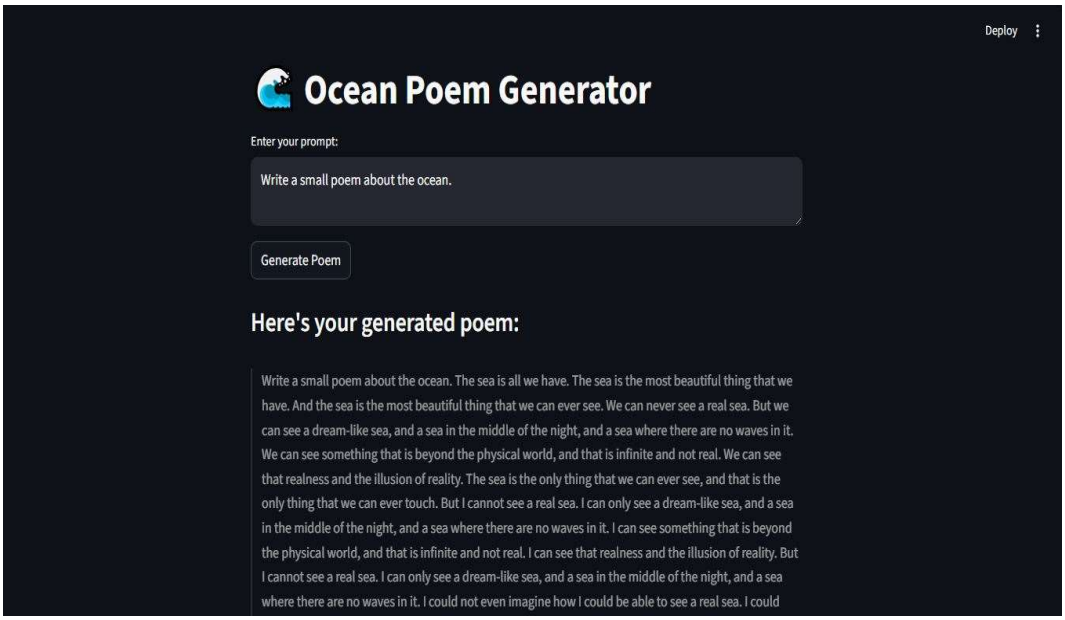

Fig3: Output Snapshot 2