Documentation for Basic Chatbot with Llama 3

Overview

This is a simple chatbot application built using Streamlit and Groq's API to interact with the Llama 3 model.

The app takes user input, sends it to the Groq API, and displays the model's response.

Prerequisites

1. Install Dependencies

Ensure you have Python installed, then install the required libraries using:

```sh
pip install streamlit requests python-dotenv
```

- `streamlit` -> For creating the UI.
- `requests` -> For making API calls.
- `python-dotenv` (optional) -> For loading environment variables from a `.env` file.

Running the Application

1. Set Up Environment Variables

You need to set your Groq API key. You can do this in two ways:

Option 1: Set the API Key in the Terminal

Run:

```sh
export GROQ_API_KEY="your_api_key_here"  # For Linux/macOS
set GROQ_API_KEY="your_api_key_here"  # For Windows (Command Prompt)
$env:GROQ_API_KEY="your_api_key_here"  # For Windows (PowerShell)
```

Option 2: Use a `.env` File

Create a `.env` file in the project directory and add:

```
GROQ_API_KEY=your_api_key_here
```

Then load it in your Python script using:

```python
from dotenv import load_dotenv
load_dotenv()
```

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```

### 2. Run the Streamlit App

Once everything is set up, start the app using:

```sh
streamlit run app.py
```

This will launch a local server. Open your browser and go to:

```
http://localhost:8501
```

Deploying the Application Using Docker

Create a `Dockerfile`:

```Dockerfile
# Use an official Python runtime as a parent image
FROM python:3.9

# Set the working directory in the container
WORKDIR /app

# Copy the current directory contents into the container at /app
COPY . /app

# Install dependencies
RUN pip install --no-cache-dir -r requirements.txt

# Expose Streamlit's default port
EXPOSE 8501

# Run the Streamlit app
CMD ["streamlit", "run", "app.py", "--server.port=8501", "--server.address=0.0.0.0"]
```

Steps to Deploy with Docker

1. **Build the Docker image:**
   ```sh

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```
docker build -t streamlit-groq-chatbot .
```

2. **Run the Docker container:**

```sh
docker run -p 8501:8501 -e GROQ_API_KEY="your_api_key_here" streamlit-groq-chatbot
```

Conclusion

This guide provides a fully functional chatbot using Streamlit and Groq's Llama 3 API. The chatbot takes user input, sends it to the API, and displays responses dynamically.