



WEATHER CHATBOT USING OPENWEATHERMAP API

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PROBLEM SUMMARY

Build a chatbot that understands natural language to provide current weather or tomorrow's forecast for any city using real-time data from OpenWeatherMap.

- Current weather in a city
- Tomorrow's weather forecast

Users can ask questions like:

- "What is the temperature in Chennai?"
- "Will it rain tomorrow in Delhi?"

The bot replies with real-time weather information by using the OpenWeatherMap API.

APPROACH AND ASSUMPTIONS

- Uses spaCy NLP to extract city names from user input.
- Detects intent (current or forecast) using keyword matching.
- Fetches weather using OpenWeatherMap API.
- Assumes user input is in English and includes a recognizable city.

LIMITATIONS AND POTENTIAL IMPROVEMENTS

Limitations

- Only supports "today" and "tomorrow".
- No advanced intent detection (e.g., wind, humidity separately).
- spaCy may miss cities in rare sentence formats.

Potential Improvements:

- Add support for full date parsing (e.g., "next Monday").
- Use Gemini/GPT for deeper natural language understanding.
- Add UI (Streamlit) and speech input for accessibility