Background:

Welcome to the Redwood Materials backend and data engineering take-home. We ask that you spend between three and five hours on this take-home. If you still have work left to do after five hours, please feel welcome to include your next steps or thoughts in a readme. Please email your results to nicka@redwoodmaterials.com and brice@redwoodmaterials.com within 6 hours of receiving this take-home.

Problem Statement:

We would like you to build a simple command line interface in Python3 which will allow a user to retrieve the weather forecast in a given US city. The user should be able to run your file as "python get_forecast.py", then enter the name of a city and state, and then see a printout of the weather forecast for that city. If the user's input does not match the name of a city, you should clarify which city the user intended by providing a list of similarly named cities (consider using fuzzy matching or another technique).

Please focus on writing concise, well formatted Python code with maintainable and reusable structure. You're welcome to use any commonly used (standard library and otherwise) Python packages.

Implementation details

Please obtain a JSON file of all the cities/towns in the United States from the source below. This JSON file contains the valid set of cities that a user should be able to enter, and it contains the latitude/longitude coordinates of each city, which you will need to look up the weather forecast.
https://github.com/sjlu/cities/blob/master/locations.json

You can use the coordinates from a city to obtain the weather forecast through the weather.gov API
https://www.weather.gov/documentation/services-web-api

Eg:

https://api.weather.gov/points/40.101,-106.556 --->
https://api.weather.gov/gridpoints/BOU/9,81/forecast

Please handle errors from API calls appropriately and retry if needed)

Deliverables:

Please email a zip file containing your application as a git repository to the email addresses provided above.