Full-Stack Coding Challenge for DataStealth

Objective: Develop a user-friendly web app featuring geolocation-based search functionality for displaying CSV data.

Background: At DataStealth, we work with data from all over the world. Therefore, it's critical that we can understand and perform the operations we need with the data we collect. In this challenge, you will demonstrate your skills in full-stack development.

Task: Your task is to create a simple web application that presents scored results based on a user's search criteria. This application should accomplish the following:

1. **CSV to Database Migration** - Transfer data from the provided CSV file to a database for efficient storage and retrieval.
2. **Search Score** - Design and implement a scoring algorithm for user searches.
    a. You should assign confidence scores to suggestions based on the search term.
    b. You are encouraged to use other **relevance factors** as well to compute a more accurate score.
3. **Data Display** - Fetch and display relevant data from the database based on the user's search criteria.
4. **User Interface** - Design a user-friendly interface where the displayed data is clear and easily navigable. Ensure users can interact with the application effortlessly.

Sample Responses

These responses are meant to provide guidance. The exact values can vary based on the data source and scoring algorithm.

Near Match

JavaScript

```
GET /search?q=Londo&latitude=43.70011...&longitude=-79.4163

{
 "suggestions": [
  {
   "name": "London, ON, Canada",
   "latitude": "42.98339",
   "longitude": "-81.23304",
   "score": 0.9
  },
  {
   "name": "London, OH, USA",
   "latitude": "39.88645",
   "longitude": "-83.44825",
   "score": 0.5
  },
  {
   "name": "London, KY, USA",
   "latitude": "37.12898",
   "longitude": "-84.08326",
   "score": 0.5
  },
  {
   "name": "Londontowne, MD, USA",
   "latitude": "38.93345",
   "longitude": "-76.54941",
   "score": 0.3
  }
 ]
}
```

No Match

JavaScript

```
GET /search?q=SomeRandomCityInTheMiddleOfNowhere

{
 "suggestions": []
}
```

Evaluation Criteria:

1) **Functionality of the Application** - Ensure accurate migration of CSV data to the database and seamless retrieval/display of relevant information based on user search criteria.
2) **Code Quality** - Maintain clean, well-organized code with proper comments and documentation for readability.
3) **Error Handling** - Implement graceful error handling for potential issues like CSV parsing errors.
4) **User Interface Design** - Create an intuitive interface that enhances user experience and fosters effortless interaction with the application.
5) **Performance** - Optimize application performance through strategies like caching or asynchronous loading.
6) **Testing** - Include unit testing to validate the reliability and functionality of the application.

Submission: Submit your code within **3 days** as a ZIP file or a link to a public GitHub repository and a live working demo. Please **refrain** from using the company name in your repository name (eg. datastealth-assessment). Please include a README file that:

1. Explains how to install and run your application.
2. Describes your approach to the challenge and any design decisions you made.
3. Contains any other information you think might be helpful or relevant.
4. Submit the public URL to your GitHub repository.

Note: The focus of this challenge is to evaluate your technical skills and creativity. We encourage you to use free and open-source tools and libraries. Leverage your existing knowledge and experience. Good luck!

Please ensure you respect the terms of service of any APIs or services you use. Your application should not store any personal data or sensitive information.