Web Application to find restaurants based on food allergies or intolerances

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***Abstract*— There are many who suffer from food intolerance and allergies around us, yet there is no simple solution to find restaurants that have food options that cater to these dietary restrictions. This can be increasingly frustrating and inconvenient to individuals who deal with these intolerances/allergies. Hence, we came up with the idea of "DineSafe". It is a webpage that uses restaurant diet options to find restaurants based on food allergies or intolerances. Our objective is to provide a user-friendly and convenient guide based on dietary filters. This can additionally benefit individuals who are on dietary restriction for other reasons too.**

Keywords—Web-Application, JavaScript, API, GitHub

I. INTRODUCTION

Food allergies and other types of food hypersensitivities affect millions of Americans and their families. Food allergies occur when the body's immune system reacts to certain proteins in food. Food allergic reactions vary in severity from mild symptoms involving hives and lip swelling to severe, life-threatening symptoms, often called anaphylaxis, that may involve fatal respiratory problems and shock. While promising prevention and therapeutic strategies are being developed, food allergies currently cannot be cured. Early recognition and learning how to manage food allergies, including which foods to avoid, are important measures to prevent serious health consequences. Hence, we came up with the idea of "DineSafe". It is a webpage that uses publicly available restaurant food information to find restaurants based on food allergies or intolerances. Our objective is to provide a user-friendly and convenient guide based on dietary filters. This can additionally benefit individuals who are on dietary restriction for other reasons too.

II. TECHNOLOGIES USED

A. Repository and Deployment

The source code is stored on GitHub. The web page is deployed/ hosted on GitHub Pages. GitHub Pages is a site hosting service that takes HTML, CSS, and JavaScript files straight from a repository on GitHub

B. APIs for getting restaurant information:

Assessed the following APIs to get location and diet-based restaurants:

APIs for getting restaurant information:

API used:

- **TravelAdvisor:**

https://rapidapi.com/apidojo/api/travel-advisor/

This API helps to query real-time Flights prices, Hotels booking, Restaurants, attractions, locations, etc., to create a travelling site. It can fetch restaurants details as well.

Other APIs assessed:

- **ForkAndSpoon**

https://rapidapi.com/apidojo/api/the-fork-the-spoon/

This API helps to query the best restaurant and meal around the world

Was successful for getting data using this API but it did not work consistently for all cities. There were missing attributes in the response of some apis. Like City_ID is not always displayed.

- **OpenMenuAPI**

https://openmenu.com/api/docs/restaurant.php

It is used for locating restaurants, menus and menu items. we use our proprietary algorithms to generate a feed of interesting results.

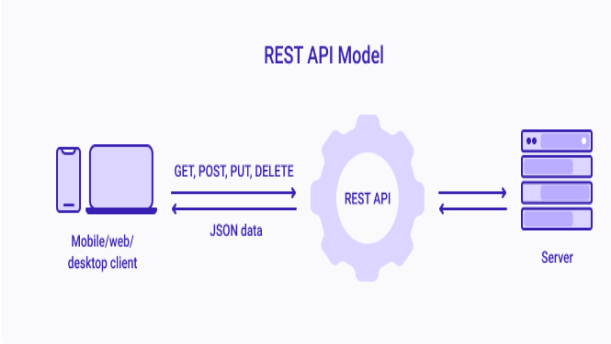
Was not successful in getting data using this API. Unable to get API_Key. It applies mainly to restaurant owners rather than consumers.

C. Frontend

We use HTML, PHP, CSS and Bootstrap to create an interactive and simple UI where the user can enter location details and select a food filter to fetch results. Other features like sending feedback, fetching more information about the web page and dining tips are also implemented.

D. Backend

We use implemented queries for REST API using pure JavaScript with AJAX to fetch the restaurant information.



III. Implementation and Results

We implemented REST API in PHP and called them in JavaScript using AJAX . In order to create a REST API, we used TravelAdvisor API function that allow us to fetch restaurant based on location. In its response it provides restaurant details like dietary and cuisine availability and other restaurant details like name, images. Contact information etc. The user can search based on the location and diet from a simple webpage that has been implemented using HTML, PHP, CSS and Bootstrap.

IV. Future Work

- Allow users to login and set preferences of filters.
- Utilize different sources to fetch restaurant details
- Store API results in a database to prevent multiple calls to the server every day.

V. Conclusion

To conclude, we successfully built and developed a web page for an location diet base serach using various technologies and frameworks. We faced multiple challenges during the progress of this project which was a great learning experience.

References

[1_] https://docs.github.com/en/pages
[2] https://www.php.net/docs.php
[3] https://www.w3schools.com/js/
[4] https://www.mayoclinic.org/diseases-conditions/food-allergy/expert-answers/food-allergy/faq-20058538