1.1 Introduction

PureDine is an online website based in React, Firebase, and Node.js that acts as a portal to search the menus and items of local restaurants and scan them for foods harmful to certain allergies. The website uses a search bar to handle user input for searching restaurants, sorting restaurants in a user's local area. Restaurants are listed and can be clicked on to scan the menus of the establishments. Checkboxes can be used to select certain categories and types of allergies which will then modify the menu with items that are safe and are not safe to consume based on the choices. The website will also have the option of making an account to allow for allergy selection and verification through the use of Firebase.

1.2 Functional Requirements Breakdown

The online allergy search website, PureDine, is composed of the following subsystems and subcategories. The subsystems and subcategories can be listed as follows: User Interaction, API Interaction, and Backend categories. The User Interaction category shall include the main search page, restaurant / menu selection, and allergy sorting. API Interaction shall include details with the following API's: Zomato API, Google Business API, and Edamam API.

1.3.1

The following requirements are levied on the User Interaction subcategory of the PureDine project.

1.3.1.1   The subcategory shall be displayed in a web application

1.3.1.2   The page shall be hosted with React combined with Firebase and coded with Node.js.

1.3.1.3 The page shall have a header that shall include, but not be limited to: a logo, an "about the site" page including a small instruction guide, and a login button.

1.3.1.4 The page shall be able to be navigated by both the dragging of the mouse or arrow keys.

1.3.1.5 The page will work with Firebase authentication to log in Google users.

1.3.1.6 The page shall display a search bar in the middle of the page

1.3.1.6 The page shall display text above the search bar that states "PureDine: Find menu allergies now!"

1.3.1.7 The search bar shall include the text "Please search up a specific restaurant, city, or zip code."

1.3.1.8 The header of the page shall be intractable with every individual selection.

1.3.1.9 The header logo shall be able to be clicked to reload the page.

1.3.1.10 The "about the site" text shall be able to be clicked to a separate page.

1.3.1.11 The about me page shall display a heading titled "About The Site".

1.3.1.12 The page shall display a short description about the site's story and functionality.

1.3.1.13 The page shall display a small instruction guide on how to use the site.

1.3.1.14 The page shall have a "back" button to return to the previous page.

1.3.1.15 Once used, the search bar on the original page shall lead to a listing of restaurants

1.3.1.16 The page shall display restaurants as listed from the Google Business API.

1.3.1.17 Resturants shall be displayed with the following information: Restaurant name, address, hours, type of restaurant, and an image of the establishment.

1.3.1.18 The page shall sort restaurants based on the type of restaurant and location closest to the user.

1.3.1.19 The page shall display the menu of a restaurant once clicked on based on the restaurant's website.

1.3.1.20 The page shall display menus as listed from the Zomato API.

1.3.1.21 The page shall list different allergies marked by checkboxes under the restaurants menu.

1.3.1.22 The page's list of allergies shall include but not be limited to:

Gluten
Peanuts
Dairy
Eggs
Soy
Fish / Shellfish

1.3.1.23 The page, once categories are selected, will highlight certain menu items based and display a message for the user.

1.3.1.24 The messages for the user shall include but not be limited to:

Safe to Eat

Eat with Caution

Possibly NOT Safe

Harmful!

1.3.1.25 The page shall include a small message at the bottom that will detail "Do not fully rely on all estimations made by PureDine, website is still in development".

1.3.1.26 Users shall be able to use the login feature to apply allergies to their personal account to avoid repeated selection.

1.3.2

The following requirements are levied on the API Interaction and Backend subcategories of the PureDine project.

1.3.2.1   The API's used throughout PureDine's use shall be the Google Business API, the Zomato API, and the Edamam API.

1.3.2.2   The Google Business API shall be utilized to allow the search bar to filter through different restaurants based on a zip code or specific area.

1.3.2.3   The Google Business API shall display different restaurants in a menu based upon several factors including but not limited to:

Name

Address

Hours

Restaurant Type

Associated Image

1.3.2.4   The Zomato API shall be utilized to allow menus of certain restaurants to be displayed and listed based on the restaurants website.

1.3.2.5   The Edamam API shall allow for the filtering of different allergies or dietary restrictions based on checkboxes or account information.

1.3.2.6   The Edamam API shall allow for highlighting of certain menu items and give recommendations of consumption based on selected categories.

1.3.2.7   The website itself shall be hosted through Firebase hosting.

1.3.2.8   The login page of the website shall be based on Firebase authentication.

1.3.2.9   The login page shall be accessed based on a login button present in the header.

1.3.2.10 The login button shall be replaced with a logout button once logged in.

1.3.2.11 The header shall display the text "Hello _____" once logged into.

1.3.2.12 The login page shall allow for a user to select checkboxes to tailor certain allergies or dietary restrictions to their specific account.

1.3.2.13 The login page shall have a back button to return to the previous page.

1.3.2.14 The menu page shall remove the checkboxes from the bottom of the site if a user is logged in.

1.3.2.15 The menu page shall automatically highlight items and give recommendations based on account information.

1.4 Performance Requirements

PureDine shall not require any special computing hardware to operate.

1.5 Project Environment Requirements

1.5.1 PureDine shall be able to execute using any standard web browser.

The list of browser applications will include but not be limited to:

Microsoft Edge

Google Chrome

Firefox

Safari

1.5.2 PureDine shall be able to be viewed with any media account.

1.5.3 PureDine accounts shall be able to be made with Google Accounts through Firebase.

1.5.4 PureDine should be able to work on desktop devices.

1.6 Development Environment Requirements

1.6.1 PureDine shall be able to be edited and modified in any code editor

1.6.2 PureDine shall require Node.js and therefore Javascript for backend and frontend code.

1.6.3 PureDine shall require multiple API's that will help with its functionality including but not limited to Edamam, Google Business, and Zomato.

1.6.4 PureDine shall require React support to allow for hosting and frontend design.

1.6.5 PureDine shall require the use of Google Firebase for both authentication and hosting

1.6.6 Firebase shall be used to allow for sign in and sign out into the site

1.7 Execution Environment Requirements

Due to the nature of the project, PureDine will not need to be executed from a local device aside from hosting with React and deployment with Firebase.