Eat Safe Frontend – Ultra Detailed Guide

Welcome to the **Eat Safe** frontend project!
This guide explains everything in simple words, so anyone can understand how the app works, how to set it up, and how the code is organized.

🚀 What is Eat Safe?

Eat Safe is a web app that helps people check the safety of restaurants in Chicago.
You type a restaurant name or address, and the app shows a summary and keywords about its safety.

📐 How is the Project Organized?

Here's what each folder and file does:

```
eat-safe-frontend/
├── public/
│   └── index.html          # The main HTML file loaded in the browser
├── src/
│   ├── api.js              # Handles talking to the backend or dummy data
│   ├── theme.js           # Sets up the look and feel (colors, fonts)
│   ├── App.js             # The main React component (the app itself)
│   ├── index.js           # Starts the app and puts it on the web page
│   └── index.css          # (Optional) Global CSS styles
├── package.json           # Lists dependencies and scripts
├── README.md              # Basic project info
└── ULTRA_README.md        # (This file!) Super detailed guide
```

🕸 How Does the App Work?

1. Starting Point
- The browser loads `public/index.html`.
- The `<div id="root"></div>` is where the app appears.

2. React App Loads
- `src/index.js` starts the React app and puts it inside the `root` div.
- It shows the `App` component from `App.js`.

3. Main App Logic (`App.js`)
- Shows a big search bar and a button.

- When you type a restaurant name or address and click "Search":
  - The app calls a function to get safety info.
  - While waiting, it shows a spinning circle (loading).
  - If there's an error (like no internet), it shows a red error box.
  - If it finds info, it shows a summary and some keywords (as chips).
- The background is a nice restaurant photo with a blur effect behind the search/results area.

4. Getting Data (`api.js`)
- The app can work in two ways:
  1. **Dummy Data Mode**: For testing, it fakes the results (no real backend needed).
  2. **Real API Mode**: It sends your search to a backend server and gets real data.
- You can switch between these by changing `USE_DUMMY_API` in `api.js`.

5. Look and Feel (`theme.js`)
- Uses Material UI for modern, clean design.
- Sets colors, fonts, and rounded corners for buttons and text fields.

🛠️ How to Set Up and Run

1. Install Node.js and npm
- Download from nodejs.org.

2. Install Project Dependencies

Open a terminal in the project folder and run:

```
npm install
```

3. (Optional) Configure API
- Open `src/api.js`.

- To use real data, set:

  ```
  const USE_DUMMY_API = false;
  ```

- Change `API_URL` to your backend's address if needed.

4. Start the App
```
npm start
```

- The app opens at http://localhost:3000.

🖥️ What Happens When You Search?

1. You type a name or address and click "Search".
2. The app calls `fetchSafetyData(query)` from `api.js`.
3. If using dummy data, it waits a bit and returns fake info.
4. If using real API, it sends your search to the backend and waits for a response.
5. Shows the results or an error.

📝 Code Details (Simple Explanations)

App.js

- Uses React hooks (`useState`, `useCallback`) to manage:
  - What you typed (`query`)
  - The results (`results`)
  - If it's loading (`loading`)
  - Any errors (`error`)
- Handles pressing Enter or clicking the button to search.
- Uses Material UI components for layout and style.

api.js

- Uses Axios to send HTTP requests.
- Has a dummy function for testing without a backend.
- Handles errors and shows friendly messages.

theme.js

- Sets up the color palette (blue and pink).
- Makes buttons and text fields rounded.
- Uses the Roboto font.

🔧 How to Test

- Try searching for "pizza" or "taco" in dummy mode to see special fake results.
- Try searching with nothing typed to see an error.
- If using real API, make sure your backend is running.

🛡️ Troubleshooting

- **Nothing happens when searching:** Check the browser console for errors.
- **Network error:** Make sure the backend server is running and `API_URL` is correct.
- **Styling looks weird:** Try refreshing or check your internet for Google Fonts.

🗐 Useful Links

- React Documentation
- Material UI Documentation
- Axios Documentation

🖰 FAQ

Q: Can I change the background image?
A: Yes! Edit the `backgroundImageUrl` in `App.js`.

Q: How do I add more features?
A: Add new components in `src/`, import them in `App.js`, and update the UI as needed.

Q: Can I use this for cities other than Chicago?
A: Yes, but you'll need a backend that supports other cities.

🎉 That's It!

You now know how Eat Safe works, how to run it, and how to change it.
Happy coding and stay safe!