

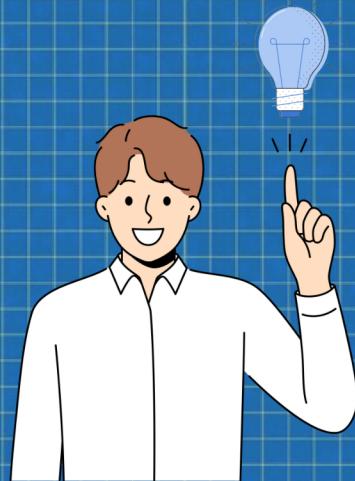
BENi  
AI



Nutritional Assistant

## Idea Summary:

Our project is a user-friendly mobile app designed to help individuals make informed food choices while shopping. Users can quickly scan the barcode of any food product using their smartphone, and the app provides detailed information about the product, including nutritional content and potential allergens. This is especially useful for those with dietary restrictions, such as diabetes or food allergies, allowing them to instantly see if a product is safe to consume. Additionally, the app features a virtual assistant powered by AI to answer any further questions about the product, making healthy shopping easy and accessible.

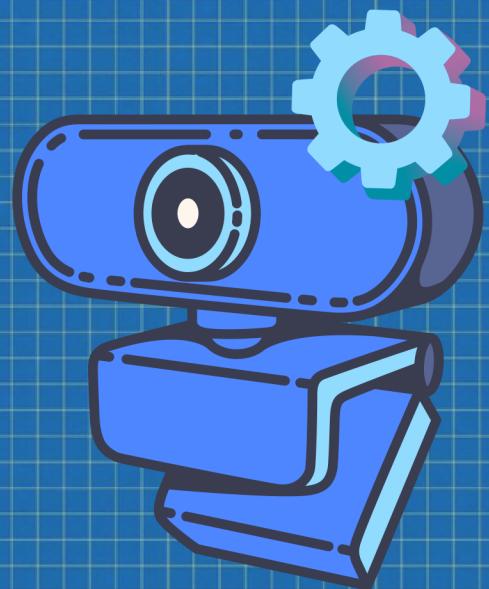


This project combines several technologies to deliver a seamless and informative shopping experience.

The key functionalities include barcode scanning, nutritional information retrieval, and AI-powered assistance, all integrated into a user-friendly mobile app. Below is a step-by-step explanation of how the project works and the technologies involved.

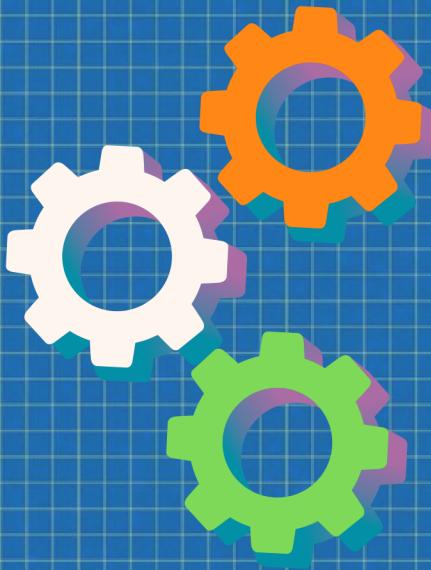
### Barcode Scanning

- **Library Used:** opencv-python (cv2), pyzbar
- **Functionality:** The app uses the device's camera to scan the barcode on a food product.
- **Process:**
  - The camera captures a live video stream.
  - Frames from the video stream are processed in real-time.
  - The pyzbar library decodes any barcodes detected in the frames.
  - The decoded barcode data is extracted and used to query product information.



## Fetching Product Information

- **Library Used:** requests
- **API Used:** Open Food Facts API
- **Functionality:** Once the barcode data is obtained, the app queries the Open Food Facts database to fetch detailed information about the product.



### Processing:

- A GET request is sent to the Open Food Facts API with the barcode data.
- The API responds with detailed product information, including nutritional facts, ingredients, and potential allergens.
- This data is then displayed to the user in a structured format.

## User Preferences and Allergen Detection

- **Library Used:** Flask (for backend processing)
- **Functionality:** Users can input their dietary restrictions and allergens into the app.
- **Process:**
  - The app stores user preferences and allergens in a local or remote database.
  - When product information is retrieved, it is cross-referenced with the user's dietary restrictions.
  - The app alerts the user if the product contains any ingredients that do not align with their dietary needs.



# BENi: Nutritional Assistant

## AI-Powered Assistance

- **Library Used: OpenAI**
- **API Used: OpenAI API (ChatGPT)**
- **Functionality: The app includes a virtual assistant to answer user queries about the product.**

### Process:

- **Users can ask questions about the product directly within the app.**
- **The query is sent to the OpenAI API, where ChatGPT processes it and generates a response.**
- **The response is displayed to the user, providing detailed and contextual information based on their query.**

## WORKING WEBAPP –

Name: Aditya Tripathi

Age: 16

Gender: Male

Nutritional Goals: Weight loss

Allergens: Gluten

Next

Scan Item

8 901719 120800

Capture Next

Product Information

Parle-G 250g

Ingredients: REFINED SUGAR, SUGAR, REFINED PALM OIL, INVERT SUGAR SYRUP, TESCO'S SALT, WHEAT, SUGAR, CITRIC ACID

Allergens: contains gluten

Calories: not specified kcal per 100g

Chat with Nutrition Assistant

I see that the scanned product is Parle-G biscuits, which contains gluten. Since you have mentioned that you have a gluten allergy, it is not safe for you to consume this product. It's important to avoid products that contain gluten to prevent any allergic reactions. If you are looking for gluten-free alternatives, I can help you find some options. Let me know if you would like me to assist you with that.

Hey, is the item I scanned safe for me to eat?

Ohh I see, can you suggest some alternatives then?

Since you mentioned that you have a gluten allergy, it's important to avoid products containing gluten like the Parle-G biscuits. Here are some gluten-free alternatives you might enjoy: 1. Fresh fruits and vegetables: Opt for a variety of fresh fruits and vegetables to snack on. 2. Rice cakes: Gluten-free and low in calories, rice cakes can be a good option for a snack. 3. Popcorn: Plain popcorn is a gluten-free and low-calorie snack. 4. Greek yogurt: Choose plain Greek yogurt without added sugars for a high-protein snack. 5. Nuts and seeds: Almonds, walnuts, chia seeds, and flaxseeds are nutritious gluten-free options for snacking. These alternatives can help you.

what's their prices for a 250g pack?

I'm sorry, but I don't have real-time access to pricing information. I recommend checking your local grocery store or online retailer for the current prices of Parle-G 250g packs.

Type your message...

Send



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