



Team Members

Amandeep Singh | Ana Carolina Arado Oliveira | Diana Malynovska
Glen Thomas | Munish Bhambra | Thiago Siqueira | Viet Tuong Pham



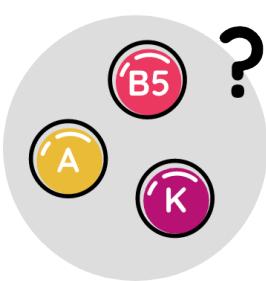
Table Of Contents

1	Project Overview.....	2
2	Project Main Features.....	5
3	Data Driven Features.....	7
4	Competitive Analysis.....	9
5	User Persona.....	11
6	Project Milestones.....	15
7	Technical Overview.....	18
8	UI Kit, Wireframes and Mockups.....	21
9	Business Strategy.....	29
10	Meet the Team.....	31
11	References.....	34

Project Overview

The Problem

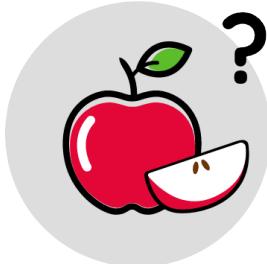
Vitamins and minerals are vital for our health but understanding which vitamins and minerals are the most beneficial can sometimes be unclear. It is also difficult to know which natural food items have the nutrients humans specifically need in their diet, and, relying too much on supplements can not only be expensive, but can lead to problems related to vitamin overdose.



Lack Of General Knowledge



Supplements Overdose



Unawareness Of Food Sources

These problems might seem small but they could lead to many dangerous issues in people's lives. Addressing these issues will not only provide the user with more knowledge about vitamins and minerals but also help them obtain a healthier and more balanced diet.

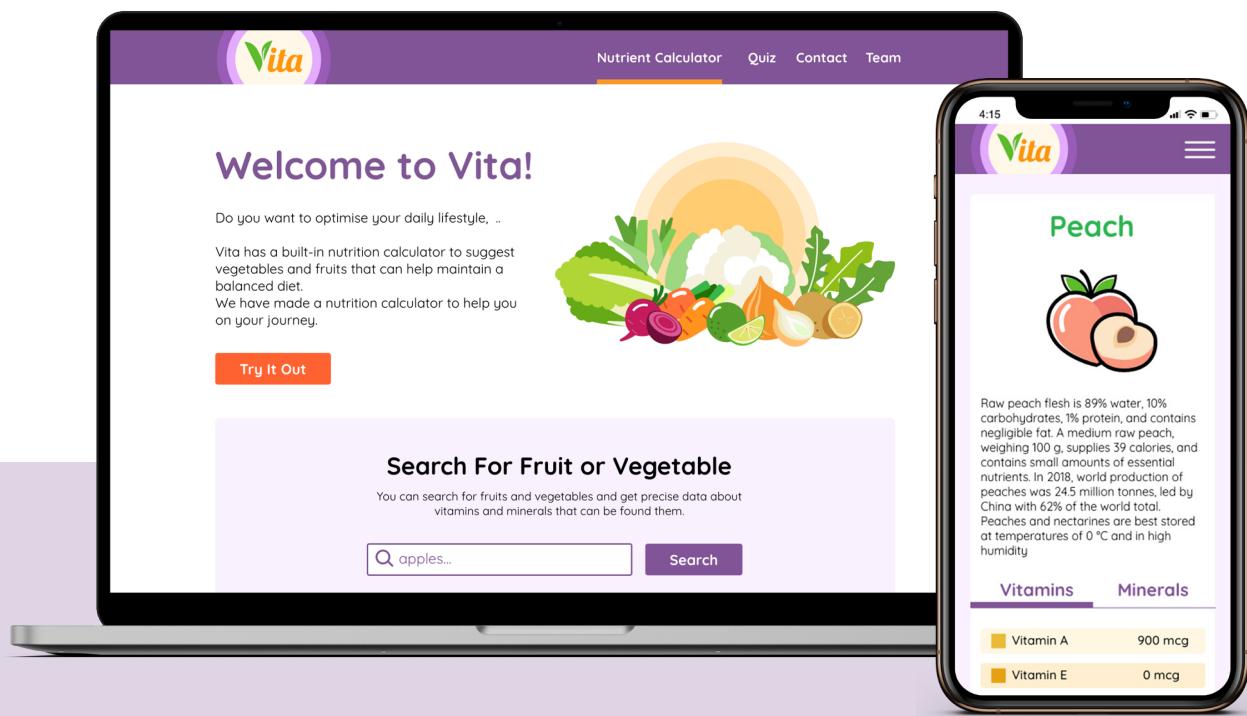
The Solution

Vita is a data-driven responsive web platform that helps users learn about vitamins and minerals that come from natural sources. Vita has a built-in nutrition calculator to get customized suggestions of fruits and vegetables that can help the users' diet.

Unlike other typical nutrient apps showing calorie needs and meal plans, Vita focuses on how the users can use fruits and vegetables to help improve their health. Vita also allows the users to select some health concerns they may have, and update the results to better address those problems.

Vita is also an educational platform that informs the users about different fruits and vegetables, vitamins and minerals, and how they relate to one another.

Linking information to customizable nutrients suggestions, we want to educate the users and help them achieve a healthier lifestyle.



Project Main Features

Features



Search For Fruit or Vegetable

The user can search for the fruit or vegetable and get its nutritional facts visualized on a chart. For this feature, we will use the Food Data Central API. Users can also choose a particular nutrient and learn about its importance, common food source and its daily amount to be consumed.



Nutrient Calculator

The users can input details about their age, weight, and height (BMR). The system will generate a recommendation of a daily intake of each vitamin and mineral. They can either select a single vitamin to learn how to consume it or go into more detail and select some health concerns (if any) eg. hair loss, skin problems, vision problems. Based on this information the system will give new suggestions of nutrient intakes per day and dietary options that can be included in their daily routine.



Learn About Vitamins And Minerals

Users can also choose a particular nutrient and learn about their importance in our body, common food source and its daily amount to be consumed. Also when a single mineral or vitamin is selected the user will get links to four fruits or vegetables that contain the most of the selected mineral or vitamin. This feature will make the user more engaged with our platform as they will not only learn what each vitamin or mineral does but also will learn from where they can obtain it.



Quiz

The platform has a quiz section where users can test their knowledge of nutrients that they have gained on the Vita platform. Users will be presented with a set of 10 questions, that will be randomized each time the user will take a quiz. In future development, we are planning to add more questions.

Data Driven Features

How data is utilized in Vita

Data is utilized in the form of text, graphics, tables and charts on our website. Any nutritional or food related information is displayed with its icon and text description which is fetched from the MongoDB cloud database. Nutritional facts of foods are fetched from USDA API and presented in tabular form. Additionally, daily nutrient intake data from the USDA website is scrapped and displayed in the form of charts.

Vita's data set

Vita's dataset includes descriptions of fruits, vegetables, minerals, and vitamins. Dataset also includes foods enriched with particular nutrients. Another, dataset is retrieved through API to recommend daily needs of vitamins and minerals as per age, gender, height and activity level.

Data interactions

Based on user inputs (age, gender, height, weight, activity levels, and up to 5 predetermined health concerns), the system will suggest the number of nutrients, which can be visualized on screen. Additionally, 4 food items related to the most lacking nutrient will be shown. Clicking on the food item, the user is taken to the detailed page for that food item. Example: If the system suggested 18.9 mg Iron, 700 mcg Vitamin A, 90mg Vitamin C, etc. We will visualize all these details on the UI, and the 4 food items that contain Iron the most. All those linking to their specific page for detailed information.

User driven

Users want to make sure they get enough essential nutrients to maintain or improve their health. Finding natural food sources to consume has never been easier thanks to this data-driven web application. Also, it will provide basic information about the importance of various nutrients in our bodies.

Vita's data source

Foods nutritional fact data is consumed through USDA API. The USDA website is also used to scrape daily nutrient intake data. A MongoDB cloud database hosts the quiz answers, food descriptions, and nutrient information.

Competitive Analysis

Competitors

					
Description	Vita is a responsive web app that helps users to breakdown the nutritional facts by selecting vitamins and minerals.	Verywell fit is a web app that helps users to get focused on fitness exercises and nutrition facts with its article based content.	Chronometer is a mobile app which targets the diet plans through which users can add nutrients and track them with reports.	Half your plate lets users give nutrition information about the fruit and vegetables. Also, it gives fresh ideas about recipes.	My food data is a responsive web application that provides nutrition tools and articles to make a good diet.
Focus Subject	Personalized Recommendation	Fitness article Content	Health Tracker	Food Facts and Recipe Content	Nutrition Tool Kits
Searching Criteria	<ul style="list-style-type: none"> • By food items • By vitamins or minerals 	<ul style="list-style-type: none"> • By keywords 	<ul style="list-style-type: none"> • By food search 	<ul style="list-style-type: none"> • By fruits and vegetables 	<ul style="list-style-type: none"> • By food items • By vitamins or minerals
Suggestions Based on User Info					
Considers Health Issues					
Educational Material					
Custom Illustrations					
Link	vitaweb.ca	verywellfit.com	cronometer.com	halfyourplate.ca	myfooddata.com

User Persona



Laura Day

“Cooking is a passion of mine. To know that I can use it to improve my family’s health makes the experience even better.”

Laura is a mother of two that worries about her family's nutrition. She loves to cook but wants to be sure her food has all the necessary vitamins and minerals to keep her family healthy.

BIO

Age: 32
Status: Married
Location: Burnaby
Education: High School
Occupation: Sales

INTERESTS

- Cooking
- Reading
- Hiking
- Gardening

BRANDS



siggis®



!ndigo

GOALS

- To provide nutritious food for her family.
- To teach her children to eat healthy food.
- To learn more about the nutrients in her diet.
- To cook with fresh ingredients.
- To vary her child's diet.

FRUSTRATIONS

- Lacks time for researching and comparing information on nutrition on various websites.
- Needs to have fast and healthy alternatives for her daughter's food.

PERSONALITY

Introvert	● ● ● ● ● ● ●	Extrovert
Passive	● ● ● ● ● ● ●	Active
Conservative	● ● ● ● ● ● ●	Innovative
Curious	● ● ● ● ● ● ●	Cautious
Organized	● ● ● ● ● ● ●	Careless

TECH ENABLE

Mobile	● ● ● ● ● ● ●	Desktop
Casual User	● ● ● ● ● ● ●	Power User
Laggard	● ● ● ● ● ● ●	Early Adopter

**BIO**

Age: 25
 Status: Single
 Location: Vancouver
 Education: University
 Occupation: Student

INTERESTS

- Cooking
- Skincare
- Watching Movie
- Shopping
- Using social media

BRANDS

Taylor Hortons

“What you eat literally becomes you. You have a choice in what you’re made of.”

Taylor is a college student who studies hard and has a part-time job. She cares about her physical and mental health. She is a vegan and she prefers using organic food and fresh food for her meals. The environment is also one of her concerns.

GOALS

- To have a healthy lifestyle both on physical and mental health.
- To have a healthy diet and keep her body in good shape.
- To understand her nutrient needs.

FRUSTRATIONS

- It is hard to keep track of a healthy and balanced life with a busy schedule.
- Difficulty to find organic foods
- Having hair loss and skin problems.
- As a vegan, sometimes it is hard to have all the nutrients covered.
- Being tired all the time as she is lacking Iron

PERSONALITY

Introvert	●	●	●	●	●	●	●	Extrovert
Passive	●	●	●	●	●	●	●	Active
Conservative	●	●	●	●	●	●	●	Innovative
Curious	●	●	●	●	●	●	●	Cautious
Organized	●	●	●	●	●	●	●	Careless

TECH ENABLE

Mobile	●	●	●	●	●	●	●	Desktop
Casual User	●	●	●	●	●	●	●	Power User
Laggard	●	●	●	●	●	●	●	Early Adopter



David Miles

"Life should be enjoyed, and in order to do so, we must take care of ourselves. The time is always right to start creating better habits."

David is a web developer based in Vancouver in a multinational company currently working remotely from his personal workspace. He recently started to feel the results of poor nutrition and lack of physical activity in his health and wants to change his habits.

BIO

Age: 43
Status: Married
Location: Vancouver
Education: University
Occupation: Web Developer

INTERESTS

- Board Games
- Movies
- Poker With Friends
- Reading
- Playing The Trumpet

BRANDS

Tim Hortons

NETFLIX

COSTCO

Walmart



GOALS

- To eat better and healthier.
- To pay attention to his habits and how they impact his health.
- To change his diet in a healthy but also convenient way.

FRUSTRATIONS

- Does not have time or the desire to cook.
- Not used to thinking about his diet.
- Is starting to have health problems (Constantly tired, digestive problems, difficulty falling asleep, vision problems...).

PERSONALITY

Introvert	●	●	●	●	●	●	●	Extrovert
Passive	●	●	●	●	●	●	●	Active
Conservative	●	●	●	●	●	●	●	Innovative
Curious	●	●	●	●	●	●	●	Cautious
Organized	●	●	●	●	●	●	●	Careless

TECH ENABLE

Mobile	●	●	●	●	●	●	●	Desktop
Casual User	●	●	●	●	●	●	●	Power User
Laggard	●	●	●	●	●	●	●	Early Adopter

Project Milestones

Design Plan



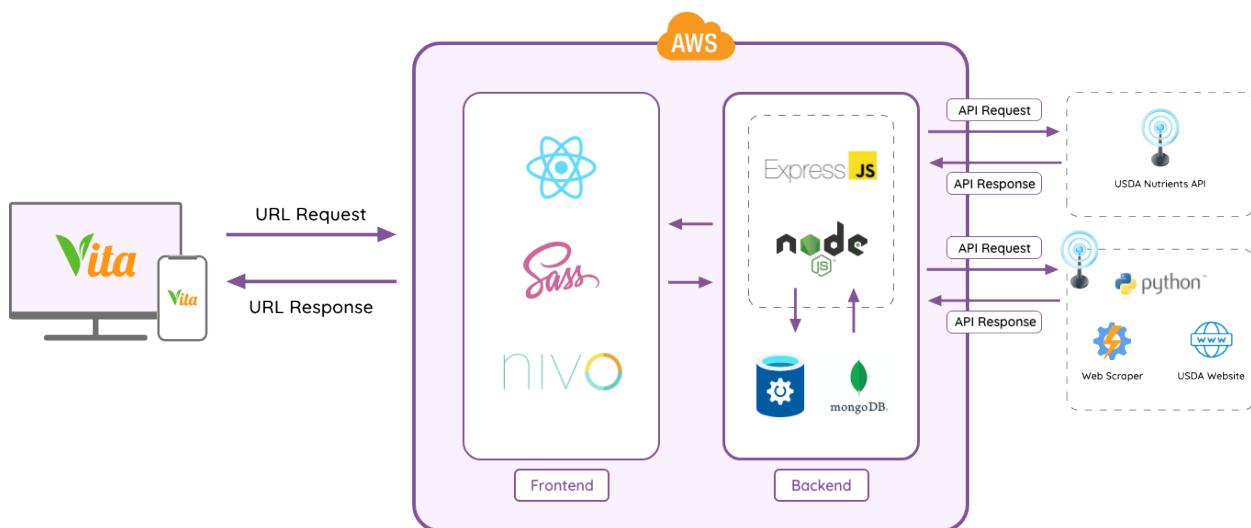
Development Plan

Week 1	Finalising Project Idea / Platform Plan / Create Basic DevOps Environment
Week 2	Competitors Research / Select Platforms And Frameworks / Study MERN Stack
Week 3	Feature List and Supporting Documentation / Data Model / Testing APIs
Week 4	Researching And Creating API For Nutrition Calculator / Studying MERN Stack
Week 5	React Boilerplate / Learning Modules / Database Design / React Components
Week 6	Custom API Creation / Project- Server Side Tech Stack / Components Review
Week 7	Functioning Prototype (Apha Build) / Initiate Front-end Development
Week 8	Functioning Prototype (Apha Build) / Bug Report And Prioritizing Tasks
Week 9	User Testing (Bug bash) / Beta Building
Week 10	Beta Building Finalization / Code Freeze / Live site URL
Week 11	Presentation Plan / Final design files /
Week 12	Final Presentation / Final Dev Documentation

Technical Overview

System Diagram

Our frontend utilizes modern technologies like ReactJS, Sass and Nivo charts. Backend is built up of NodeJs to connect with MongoDB and endpoints to various datasets are exposed using ExpressJS. The whole package of front and backend is hosted on AWS. Web Scraper (written in python) is used to connect to third party websites and provide dataset which is passed to node and then further transferred to the react module to display on the front end.



Design Software

For the technology, our design team uses Adobe Illustrator and Photoshop to create Icon and Illustration, XD is for the prototype and Indesign for our proposals and documents.



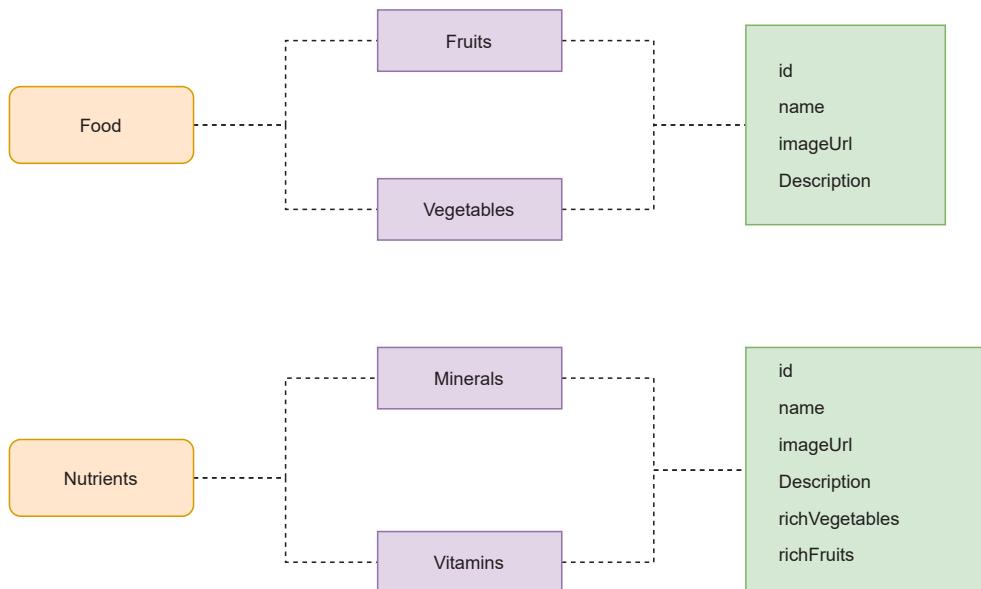
API Endpoints

Vita used 4 internal API endpoints to fetch data from MongoDB Cloud database. Third party API's are used to get nutrients daily intake and food nutrient breakdown.

Process	API endpoint	Data Returned
Quiz	/GetAllQuiz	List of all quiz items.
Team	/GetAllTeam	List of team member with details.
Nutrient Search	/GetAllNutrients	List of nutrients and their description.
Food Search	/GetAllFoods	List of food items and their description.
Food Nutrient Breakdown	api.nal.usda.gov/fdc/v1/foods/search	List of vitamins and minerals present in search
Nutrient Calculator	https://fdc.nal.usda.gov/api-guide.html	Data scrapped from USDA site

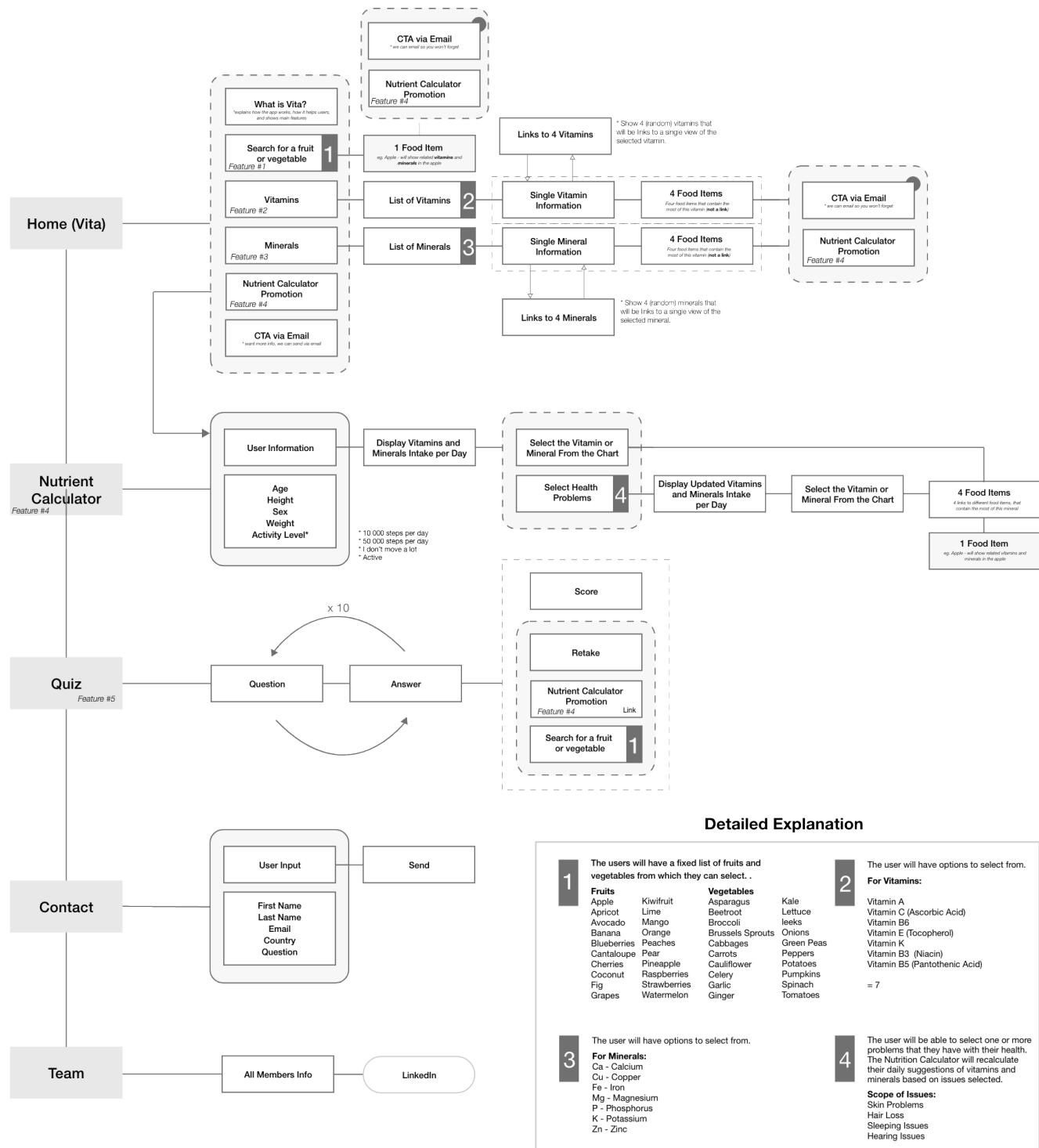
Database Diagram

The Mongo database contains two main collections, “Food” and “Nutrients”. Food collection has documents named “Fruits” and “Vegetables”, whereas Nutrients has documents named “Minerals” and “Vitamins”. The green box on the right shows the data properties of each document.



UI Kit Wireframes Mockups

User Flow



Wireframes Samples

VITA

Nutrient Calculator Quiz Contact Team

4/10

Which fruit contains the most potassium?

Potassium helps regulate fluid balance, muscle contractions and nerve signals.

Correct Answer Banana Wrong Answer Peach

Orange Apple

Next

All right reserved @Vita 2021

VITA

4/10

Which fruit contains the most potassium?
Potassium helps regulate fluid balance, muscle contractions and nerve signals.

Correct Answer Banana Wrong Answer Peach

Orange Apple

Next

All rights reserved @Vita 2021

VITA

Nutrient Calculator Quiz Contact Team

Peach

Raw peach flesh is 89% water, 10% carbohydrates, 1% protein, and contains negligible fat. A medium raw peach, weighing 100 g, supplies 39 calories, and contains small amounts of essential nutrients. In 2018, world production of peaches was 24.5 million tonnes, led by China with 62% of the world total. Peaches and nectarines are best stored at temperatures of 0 °C and in high humidity.

Vitamins

Vitamin A	400 mcg
Vitamin B12	10 mcg
Vitamin B6	1.03 mg
Vitamin B7	12 mg
Vitamin C	10 mg
Vitamin K	40 mcg
Vitamin E	35 mg

Minerals

Calcium	500 mg
Copper	100 mcg
Iron	0.7 mg
Magnesium	40 mg
Phosphorus	400 mg
Potassium	3500 mg
Zinc	80 mg

Other Fruits

Apple Blueberries Watermelon Cabbages

Try Our Nutrient Calculator Calculate

Subscribe To Our Newsletters Send

All right reserved @Vita 2021

VITA

Peach

Raw peach flesh is 89% water, 10% carbohydrates, 1% protein, and contains negligible fat. A medium raw peach, weighing 100 g, supplies 39 calories, and contains small amounts of essential nutrients. In 2018, world production of peaches was 24.5 million tonnes, led by China with 62% of the world total. Peaches and nectarines are best stored at temperatures of 0 °C and in high humidity levels.

Vitamins Minerals

Vitamin A	900 mcg
Vitamin B12	50 mcg
Vitamin B6	13 mg
Vitamin B7	2 mg
Vitamin C	90 mg
Vitamin K	90 mcg
Vitamin E	15 mg

Other Foods

Apple Blueberries Watermelon Cabbages

Mockup Samples

4/10

Which fruit contains the most potassium?

Carrot (Incorrect), Garlic, Pumpkin, Avocado (Correct)

Next

All right reserved @Vita 2021

4/10

Which fruit contains the most potassium?

Carrot, Garlic, Avocado, Pumpkin

Next

All rights reserved @Vita 2021

Peach

Raw peach flesh is 99% water, 10% carbohydrates, 1% protein, and contains negligible fat. A medium raw peach, weighing 100 g, supplies 39 calories, and contains small amounts of essential nutrients. In 2018, world production of peaches was 24.5 million tonnes, led by China with 62% of the world total. Peaches and nectarines are best stored at temperatures of 0 °C and in high humidity.

Vitamins		Minerals	
Vitamin A	900 mcg	P - Phosphorus	2,500 mg
Vitamin E	0 mcg	Zn - Zinc	900 mcg
Vitamin C	0 mg	Ca - Calcium	0 mg
Vitamin B3	0 mg	K - Potassium	0 mg
Vitamin B5	10 mg	Fe - Iron	0 mg
Vitamin B6	90 mcg	Mg - Magnesium	0 mg
Vitamin K	15 mg	Cu - Copper	0 mg

Other Fruits

Strawberry, Watermelon, Potato, Spinach

Try Our Nutrient Calculator To See Your Daily Needs

Calculate

Subscribe To Our Newsletters

Your email...

Subscribe

All right reserved @Vita 2021

Peach

Raw peach flesh is 99% water, 10% carbohydrates, 1% protein, and contains negligible fat. A medium raw peach, weighing 100 g, supplies 39 calories, and contains small amounts of essential nutrients. In 2018, world production of peaches was 24.5 million tonnes, led by China with 62% of the world total. Peaches and nectarines are best stored at temperatures of 0 °C and in high humidity levels.

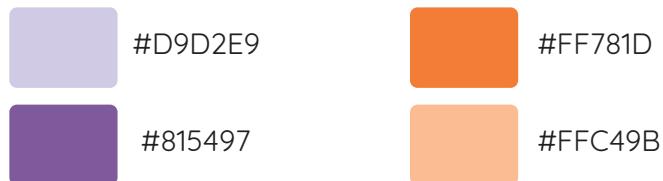
Vitamins		Minerals	
Vitamin A	900 mcg	P - Phosphorus	2,500 mg
Vitamin E	0 mcg	Zn - Zinc	900 mcg
Vitamin C	0 mg	Ca - Calcium	0 mg
Vitamin B3	0 mg	K - Potassium	0 mg
Vitamin B5	10 mg	Fe - Iron	0 mg
Vitamin B6	90 mcg	Mg - Magnesium	0 mg
Vitamin K	15 mg	Cu - Copper	0 mg

Other Foods

Strawberry, Watermelon

UI Kit

Vita uses rounded shapes and engaging colours to create a friendly and inviting atmosphere. The primary colour is purple because it is a colour related to beauty products and healthcare, frequently associated with vitamins.



Typography

The logo's typeface is Lobster. Quicksand is the main font family and it is used in different weights and sizes throughout the website.

Logo's typeface: **Lobster**



Main font family: Quicksand

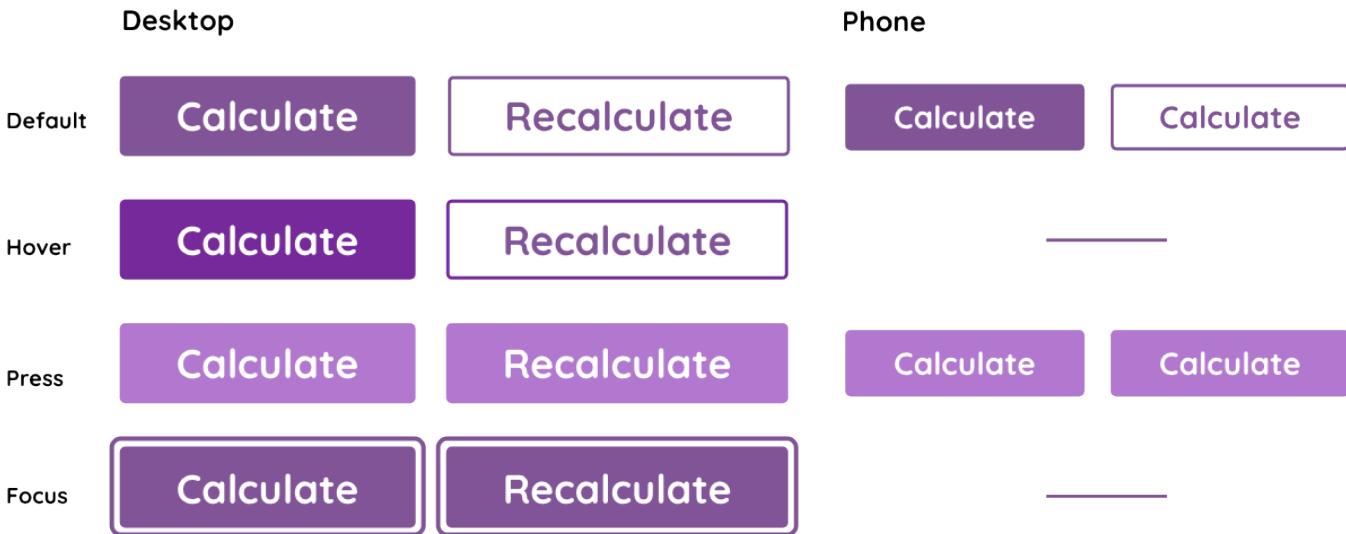
Quicksand 20px Heading

Quicksand 18px Heading

Quicksand 16px Body text

Buttons

The dominant colour for the buttons is purple. The only button that has a different colour is the dark orange Call to Action on the Homepage.



Desktop

Button height: 72px
 Font-family: Quicksand
 Font size: 36px
 Weight: Bold
 Padding: 13px 50px 13px 50px;

Phone

Button height: 58px
 Font-family: Quicksand
 Font size: 25px
 Weight: Bold
 Padding: 12px 43px 12px 43px;

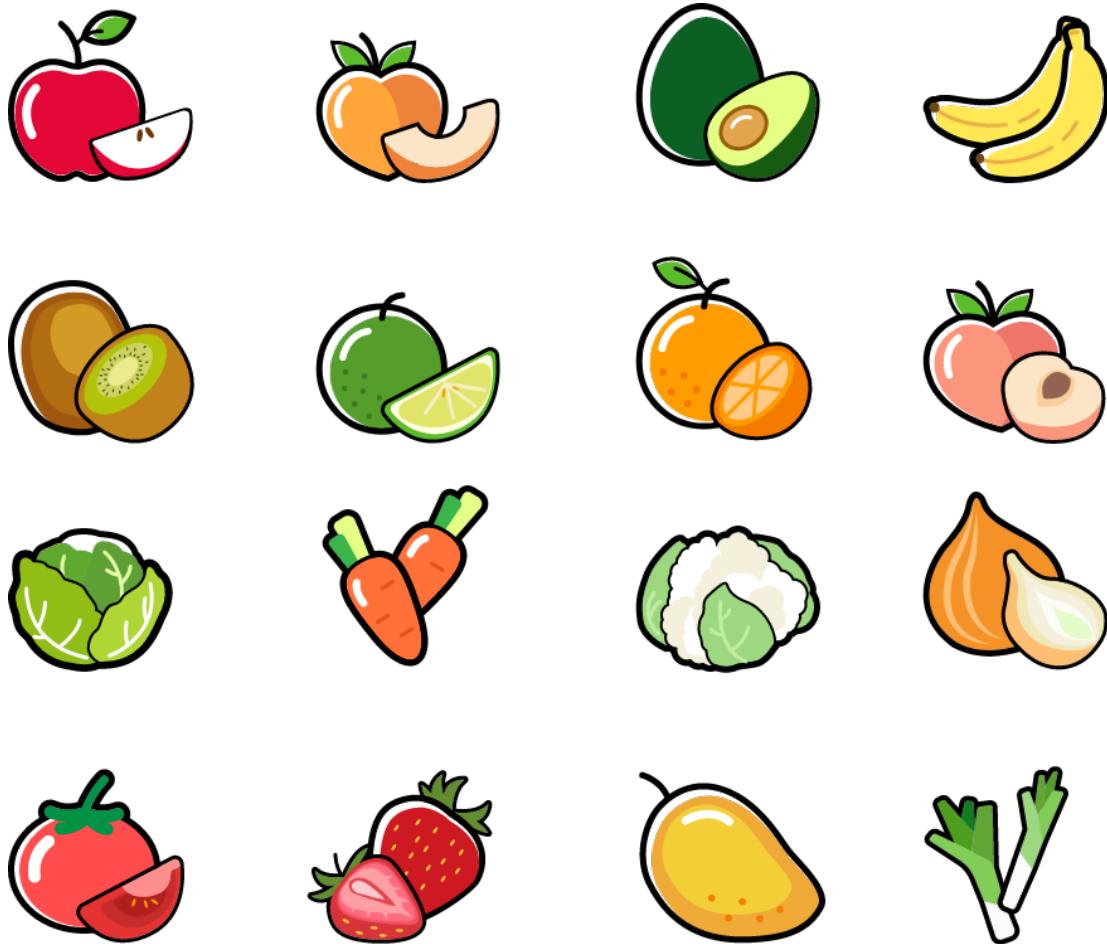


Buttons Colours

	#F43C03		#815497
	#C72F00		#76299B
	#FF784E		#B277CE

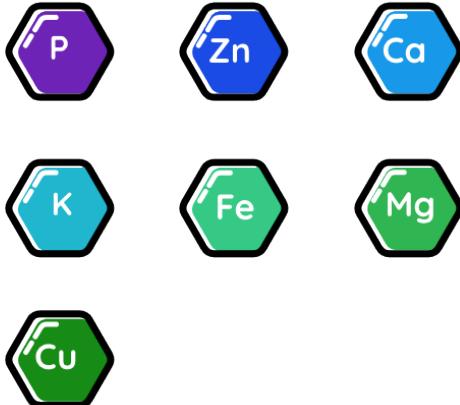
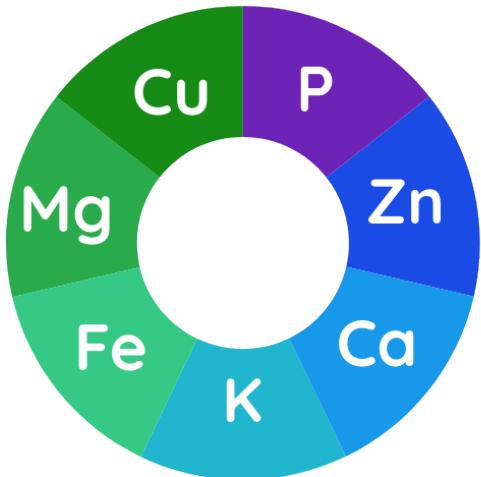
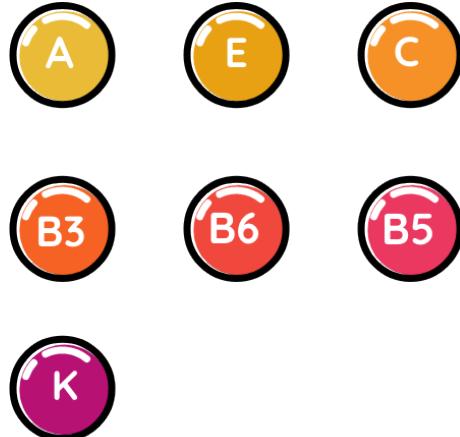
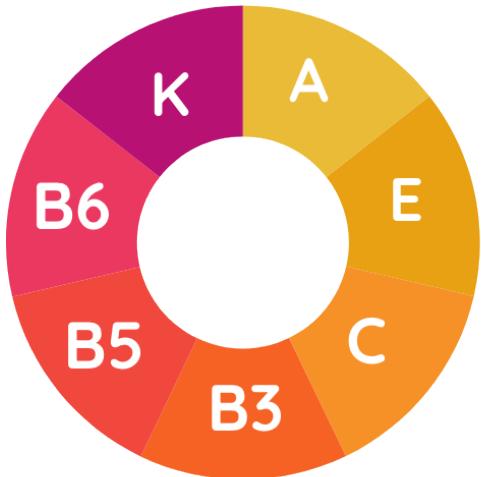
Fruits and Vegetables Icon Set

For the food items, we chose colours that are iconic to those foods, but that also harmonise with our original colour pallet. Because they also appear as illustrations on the pages for each fruit and vegetable, they were designed to have enough details to still be interesting when seen in a larger scale while still being well recognizable in smaller sizes.



Vitamins and Minerals Icon Set

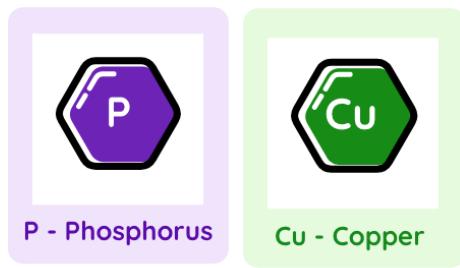
To help Vita's users quickly recognize the different nutrients, they all have different colours with vitamins having warm colours and being represented by circles, and minerals having cold colours and being represented by hexagons.



Hex Codes:

- | | |
|-----------|-----------|
| ● #EABB36 | ● #6D23B5 |
| ● #E8A113 | ● #1A4BE5 |
| ● #F69128 | ● #1898E8 |
| ● #F56224 | ● #17C9C0 |
| ● #F1483D | ● #3DE89E |
| ● #EB3860 | ● #30B553 |
| ● #B71174 | ● #168B16 |

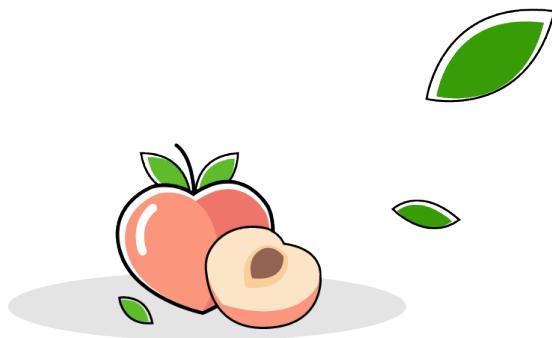
Icons Use:



Business Strategy

Future Plans

In the future if we decide to continue with this project we are planning to collaborate with local farmers to deliver fruits and vegetables to the door as well as give reward bonuses for completing our quizzes. The user will be able to redeem these points for the discount on fruits and vegetables.



Meet The Team

The Team Intoduction

We are highly motivated individuals who want to make learning about nutrients and vitamins more fun! The goal of our web platform is to help educate individuals in maintaining a healthy lifestyle.



Diana Malynovska

Project Manager / UX Designer

I am a deadline-driven UX Designer focused on overseeing projects from concept through final delivery. Resourceful and hardworking with vendor sourcing expertise and empowering leadership skills illustrated over 3 years of working in the industry.



malynovska-diana



diana309



Thiago Siqueria

Lead Developer / Full Stack Developer

I have five years of experience leading people and another five managing projects. Through these years I developed organizational and structural skills. It's amazing how easy the task becomes after a good planning phase.



stsiqueira



stsiqueira



Veit Tuong Pham

Lead Designer / Graphic Designer

I have been in the design field for the past 8 years. I am always pushing to educate myself in the areas of accessibility and user-focused research. The goal of my work as a UI/UX designer is to assist users in achieving their goals through the design and functionality of products.



viet-tuong-pham



vtuongpham



Ana Carolina Arado Oliveira

UX / UI Designer

I have a background in architecture, including the design principles it shares with web design. My main area of interest has always been the interface of people and their environment, and through a user-centric approach, to transform that interface into a rich, and accessible experience.



ana-carolina-arado



ana-arado



Amandeep Singh

Full Stack Developer

I am a full-stack developer with over 6 years of experience providing cutting-edge engineering solutions to multinational companies and small businesses through modern web applications. Expertise and experience in building, deploying, maintaining, and monitoring web applications.



amandeep-singh-dev



factorcode



Munish Bhambra

UX / UI Designer

I am a self-motivated and enthusiastic web designer. I am always pushing to educate myself in the areas of accessibility and user focused research. I possess a clear understanding of modern application design practices and tools for creating responsive web applications.



munish-bhambra



munishbhambra



Glen Thomas

Full Stack Developer

I worked as a developer for 3 years with knowledge of developing web applications and scraping public data. I am constantly experimenting with new technologies and techniques. I am passionate about development, and strive to better myself as a developer, and the development community as a whole.



glen-tk



glen1995

Reference

Reference List

FoodData Central API Guide: <https://fdc.nal.usda.gov/api-guide.html>

Nutrient Calculator (Scraped Data): <https://www.nal.usda.gov/fnic/dri-calculator/>

