

Minimum Viable Product Criteria

Datu Beech
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Yoobee Colleges
302.3

Market Viability

The target audience is people who are interested in tracking their calories, macronutrient intake, bodyweight and exercise output throughout the day and across time.

The app provides multiple ways for users to record this data easily including voice logging, typed natural language inputs and classical editable fields. Previous entries can be reviewed and visualized.

This product especially targets budget conscious consumers and people who are on the go. The backend application has been hosted cheaply on serverless cloud compute services and the frontend is delivered as a static PWA minimizing costs to be passed on to the customer. Off-line sync functionality takes advantage of local storage to let users use the app to log fitness data even when they don't have an internet connection.

The AI integration allows users to record entries quickly and in their own language, not being tied down to tricky to navigate forms could encourage users to record entries more consistently, making them more conscious of their health choices and helping them meet their goals.

The onboard voice logging makes it even easier for people to log fitness data. By simply holding down a button and talking they can log meals, exercise and bodyweight in a simple, natural language message.

Monetary Viability (5%)

The price to host the frontend (React) application is \$0 per month. It is hosted for free using Cloudflare pages. This service is ideal because it still delivers the frontend content to users quickly through worldwide CDN caching and is also

https by default. Other static content hosting providers host additional fees for these benefits. Once the user downloads the app as a PWA and installs it on their phone, they do not need to visit the Cloudflare domain again. This is even cheaper than hosting on the app store.

The price to host the backend application (FastAPI) is \$0 per month. It is hosted on free-tier serverless [Render.com](https://render.com) servers.

The OpenAI API calls use gpt-4.1-mini, a small and cost effective model. The current rate for this model via API is \$0.40 cents USD per million input tokens and \$1.40 USD per million output tokens. This is equivalent to a fraction of a cent per user per day assuming three meals and two exercise sessions logged per day.

The user database is hosted on Firebase as a Firestore database. Firestore charges by data usage but typically apps with less than 5000 users fall within the free-tier of this service. The cost for running the user database is \$0.

The nutrition database is hosted on AWS RDS, a managed Postgres database service. The price to host the database is approximately \$22.90 USD per month, with additional charges added only if huge numbers of reads happen (which is unlikely with less than 100 users).

This application could be profitable as is with 25 paying users paying 1 dollar (USD) per month for the service. If user numbers increase beyond that we can charge the same amount and upgrade to paid-tier services on the same platforms to ensure usability is maintained.

Security and Privacy

User data is encrypted in transit using HTTPS transport.

User data is encrypted at rest using AES-256 encryption, which is industry standard and enforced by Firestore.

Users must authenticate using Firestore authentication and can only access records which match their Firestore generated credentials.

Backend endpoints are protected by Firebase JWT authentication, the endpoints including the AI service endpoints cannot be accessed unless a user is logged in, preventing abuse from unauthorized users.

No PII for users is stored in logs anywhere in the application.

On board voice logging means user voice logs are never handled by 3rd party applications.

USP and Innovation

This application is distributed as a PWA (Progressive Web App). Being a PWA users can choose not to download the application if they prefer to use it from the browser and save space on their phone, in contrast to most modern applications which are distributed via the app store.

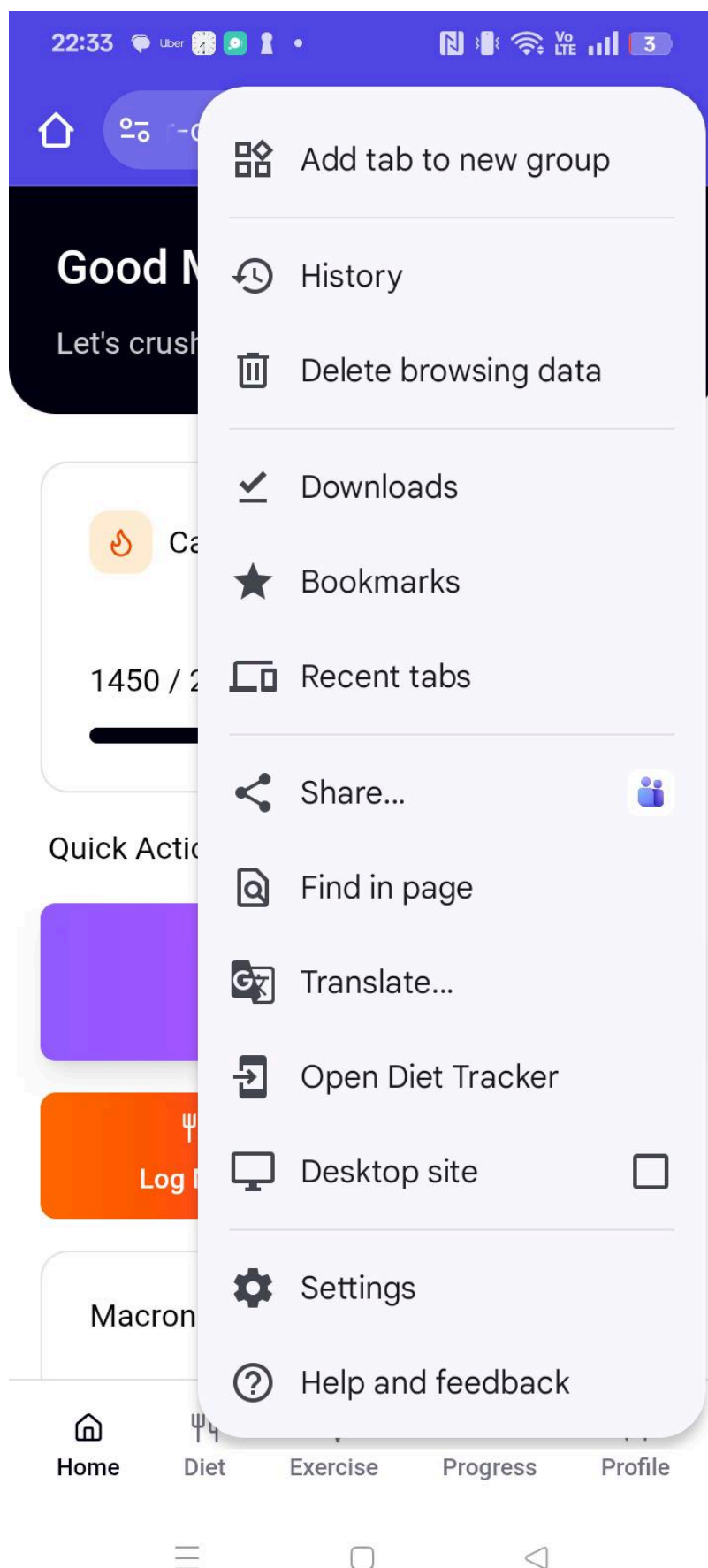
The key points of innovation in this app are the natural language interface and offline first logging. Traditional fitness tracker apps require the user to record meals and exercises through forms and picklists. This app allows the user to record or type a message which contains everything they want recorded about their fitness data. AI processes the input message and structures it before calculating nutrient and calorie breakdowns, storing it and visualizing it for the user. While AI processing requires an internet connection, local storage staging is used to ensure users can always record their logs as needed even without a current internet connection, these logs are processed and stored in the cloud database later when the internet becomes available.

Customer Support

Installing the Application

In a browser navigate to: <https://diet-tracker-datu.pages.dev>

Click on more, + or </> depending on your browser and select install on homescreen (if it is already installed this will say Open Diet Tracker)



Creating an Account

Create an account with an email and a six-digit password.

Alternately login using your Google account through social login.

The image displays two side-by-side screenshots of a mobile application interface, likely for a diet and exercise tracker.

Left Screenshot: Create Account

- Header:** "Create Account"
- Text:** "Start tracking your diet and exercise today"
- Buttons:** "Login" and "Sign Up" (highlighted)
- Form Fields:**
 - Email:** datubeechmusic@gmail.com
 - Password:** (masked with dots)
 - Confirm Password:** (masked with dots)
- Footer:** "Or continue with" followed by a "Continue with Google" button and a link "Already have an account? Sign in here".

Right Screenshot: Sign in - Google accounts

- Header:** "Sign in - Google accounts" with a close button (X) and a menu icon (three dots).
- Text:** "accounts.google.com"
- Section:** "Sign in with Google"
- Section:** "Choose an account"
- Text:** "to continue to" followed by the link "diet-tracker-datu.firebaseio.com".
- Account List:**
 - Datu Beech:** datubeechmusic@gmail.com
 - Crying Club:** cryingclubband@gmail.com
 - Datu Beech:** datubeech.software@gmail.com
- Footer:** "Use another account" and a language dropdown menu set to "English (United Kingdom)".

Sign In

After you create an account you will be automatically signed in, if you log out log back in using the credentials you made previously

The screenshot shows a mobile app interface for signing in. At the top, there is a status bar with the time 22:35, various icons, and a battery level of 3%. Below the status bar is a "Save password?" dialog box from Google Password Manager, suggesting to save the password for "datubeechmusic@gmail.com". The main sign-in screen has a "Welcome Back" heading and a subheading "Sign in to your FitTracker account to continue your health journey". There are two buttons: "Login" and "Sign Up". Below these are input fields for "Email" (containing "datubeechmusic@gmail.com") and "Password" (containing "....."). A link "Or continue with" is followed by a "Continue with Google" button. At the bottom, there is a link "Don't have an account? Create one here". The bottom of the screen shows standard Android navigation icons.

22:35

Save password?

To Google Password Manager for datubeechmusic@gmail.com

Save

Welcome Back

Sign in to your FitTracker account to continue your health journey

Login Sign Up

Email

datubeechmusic@gmail.com

Password

.....

Or continue with

Continue with Google

Don't have an account? [Create one here](#)

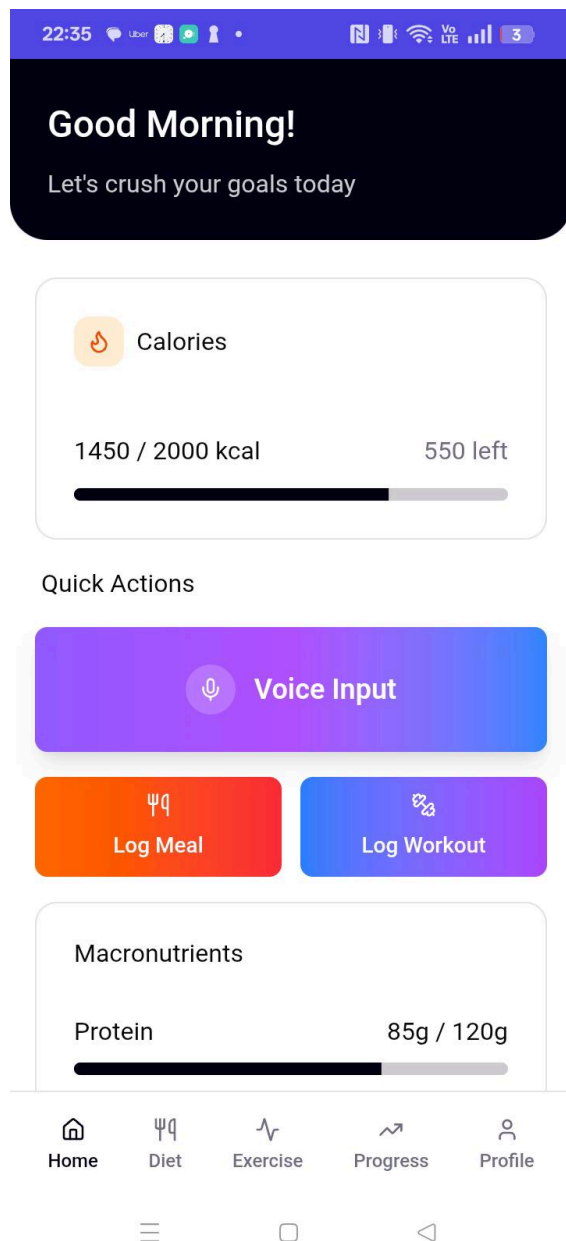
Log a Voice Entry

In the home tab, to log a voice entry hold down the purple voice input button.

In your own words say what you ate, what exercise you did or what your current body weight is!

The AI will parse your input and store your fitness data.

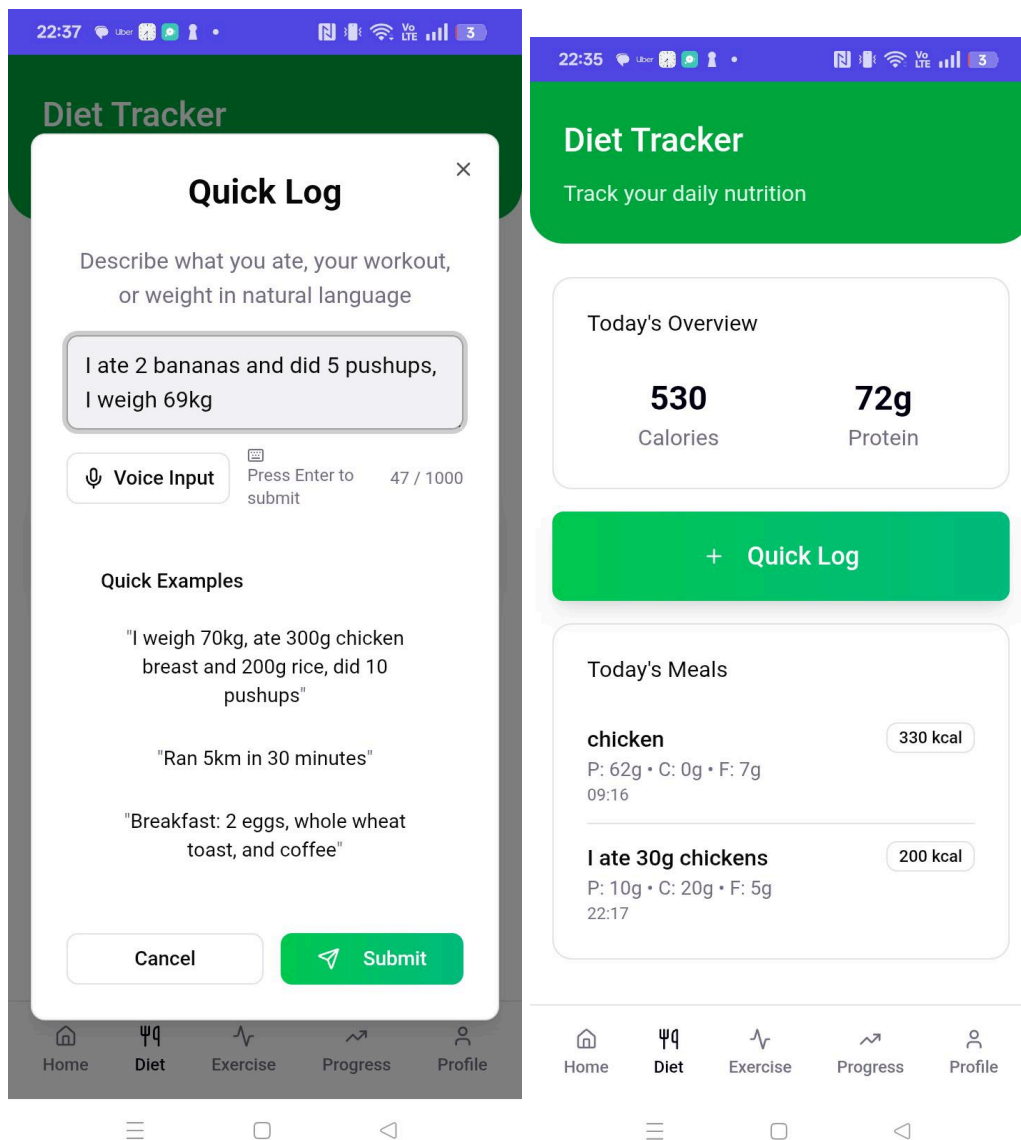
Note: Voice logging is currently only supported on Oppo smartphones.



Log a Typed Entry

You can also type inputs on the diet and exercise tabs using the quick log button.

Record the types and quantities of foods you ate, it works best if you can the amount in grams but the system can also handle quantities. You can also record exercise and bodyweight.



Update your personal info

Weight will be updated via voice logs. Your other metrics can be manually updated here using the pen icon.

The screenshot shows a mobile app interface with a blue status bar at the top displaying the time 22:35, signal strength, and battery level. Below the status bar is a white header with a profile picture and the email address datubeechmusic@gmail.com. The main content area is divided into several sections: a 'Total Workouts' section showing the number 28; a 'Personal Information' section with a pen icon for editing, containing fields for Age (27 years), Height (181 cm), Current Weight (with minus and plus buttons), and Target Weight (74 kg); and a 'Daily Goals' section with a target icon, showing Calories (2000 kcal), Protein (140g), Carbs (250g), and Fat (80g). At the bottom of the main content area is a red button with a right arrow and the text 'Sign Out'. The bottom of the screen features a navigation bar with five icons: a home icon, a fork and knife icon, a heart rate icon, a squiggle icon, and a person icon. Below the navigation bar is an Android-style home indicator bar.

22:35

datubeechmusic@gmail.com

28
Total Workouts

Personal Information

Age
27 years

Height
181 cm

Current Weight
- +

Target Weight
74 kg

Daily Goals

Calories
2000 kcal

Protein
140g

Carbs
250g

Fat
80g

Sign Out

View your progress

View your progress visually on the progress screen

