# Tidbit
## A calories counting application

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Keeping track of food and calorie consumption might be **beneficial** for some people in **supporting weight reduction.**

# Usability Problem

To **calculate the amount of calorie intake**, people often have to roughly predict the following:

the amount of each ingredient

ingredients that the food includes

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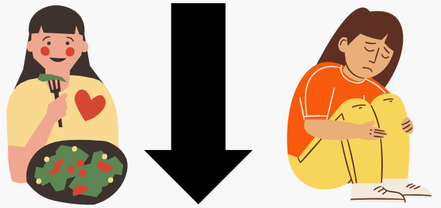
# Usability Problem

## Problem



users **manually** inputting the amount of food intake

- higher chance of **inaccuracy**
- requires significant **effort** and **dedication**

People often find themselves **giving up** on calories counting applications.

# Existing Solutions

A traditional way of keeping track of calorie intake

**Journaling**

Users have to measure the portions of everything they eat and **log it in a journal**


There are big downsides to this method as it is **a lot of work** and it's **hard to see everything** in a journal.

# Existing Solutions

There are current applications in the App Store like;

- *Lose It*
- *MyFitnessPal*
- *Lifesum*

} created mainly for monitoring calories



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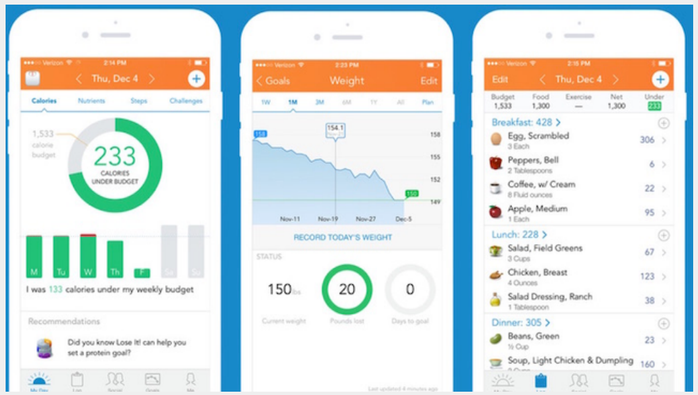
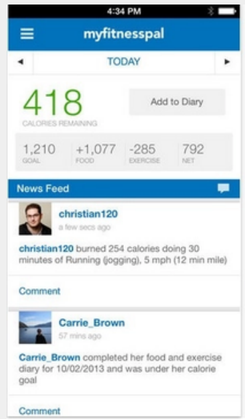
# Existing Solutions

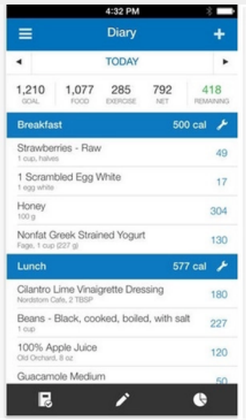
## Lose It, Lifesum and MyFitnessPal

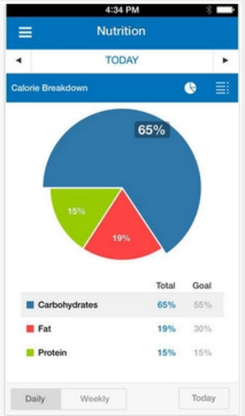
- setting **calorie goal** for the day
- receiving **recommendations** for calorie intake goal (depending on the user's *weight*, *height*, and *goal*)
- **manually** inputting food information
- receiving **notification when going over intake goal**
- viewing **health articles** in-app
- receiving **warnings** based on unhealthy goals

similar features

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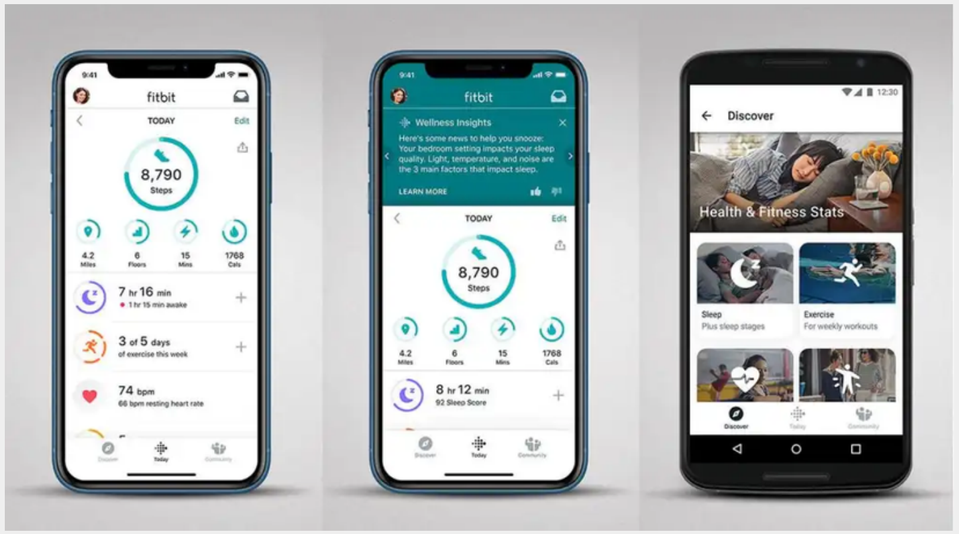
# Existing Solutions

## Fitbit

combines **nutrition** and **fitness tracking** with **sleep** and other non-exercise **activity**




✓ integrating healthy habits

✗ being expensive

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# Existing Solutions


- barcode scanner
- accurate nutrition data
- intermittent fasting timer
- diet-specific support

} no need for guesswork

**disadvantage** of the app is there is not as much information on fitness

**LogMeal API:** AI Food Image Recognition

# Existing Solutions

Pros

## **LogMeal API:** AI Food Image Recognition

# Existing Solutions

**Cons**

- They **only** have a **kiosk** which consists of a scale, a camera and an user interface.
- We **cannot bring** it along with us.
- They have **API** for developing a mobile app.
- It's really **expensive**.
- **No weight estimation**.

# Existing Solutions

MyNetDiary

**calorie tracker** that **offers tips and comments** to keep the users motivated on their diet plan

Log in your food;

1. **manually**
2. by using a **voice log**
3. with a **barcode scanner**

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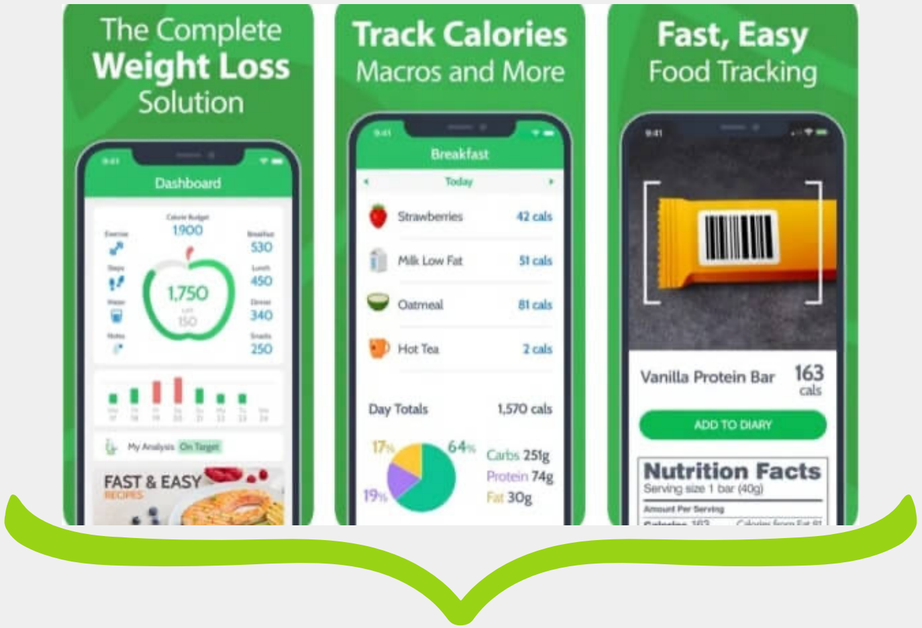
# Existing Solutions

MyNetDiary




- daily nutrient and meal **analysis**
- macro **charts**
- access to numerous **recipes** (including options for vegan, vegetarian, and gluten-free diets)

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# Existing Solutions

## Calory

home page displays a bar **chart** with the percentage of calories consumed and remaining calories for the day


- includes **reminders** to log your calories
- **food database** linked to the basic USDA food database

- tracks daily calories only; premium upgrade required to track macros
- USDA database may be tricky to use
- syncs with Apple Health only

»

# Calory

# Existing Solutions

- includes **reminders** to log your calories
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- tracks daily calories only; **premium upgrade required** to track macros
- USDA **database may be tricky** to use
- syncs with **Apple Health only**

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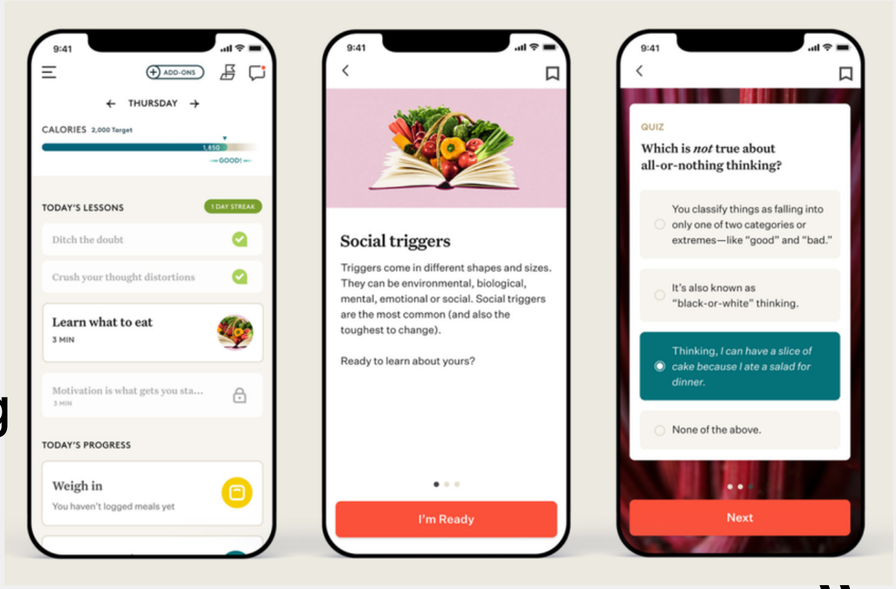
# Existing Solutions


takes a psychology-based approach to weight loss

Includes;

- daily informational **articles**
- interactive **challenges**
- food and weight **logging**
- calorie **tracking**

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# Proposed Solution

the main usability **problem** with the existing applications → **manually** entering the information about the meal and the calories of each food

## Therefore

we intend to build an application that will **detect the meal from an instantaneously captured picture** and then **estimate the calories of each item** on there.

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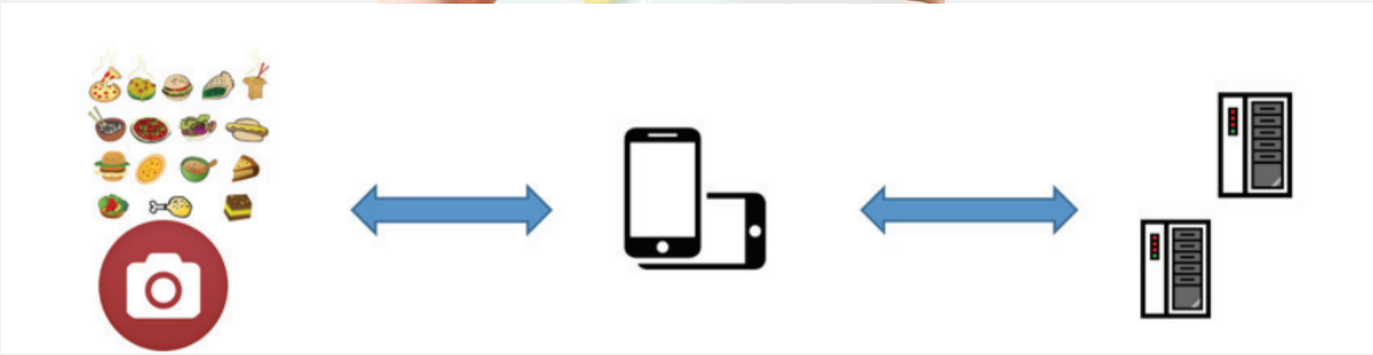
# Proposed Solution

The app will **analyze ingredients** and **calorie** information from the food image and the users might **edit** the quantities at their will.

The users can access this service **anytime** and **anywhere** since we are developing an **mobile application** as opposed to a comparable current solution LogMeal, which is created as a machine.

# Proposed Solution



Foods

Take image by phone

Process the image with pre-trained AI model



Liu, et al., A New Deep Learning-based Food Recognition System for Dietary Assessment on An Edge Computing Service Infrastructure, IEEE Transactions on Service Computing 2018

# Prototyping Plan

## 01 Low-fidelity:

### Tools:

- Low fidelity: Scissors, paper, cardboard, pencil, colored pen, marker

### Duration:

- **Design:** Week 5 ~ 6
- **User study:** Week 6~7
- **Iteration:** Week 7 ~ 9

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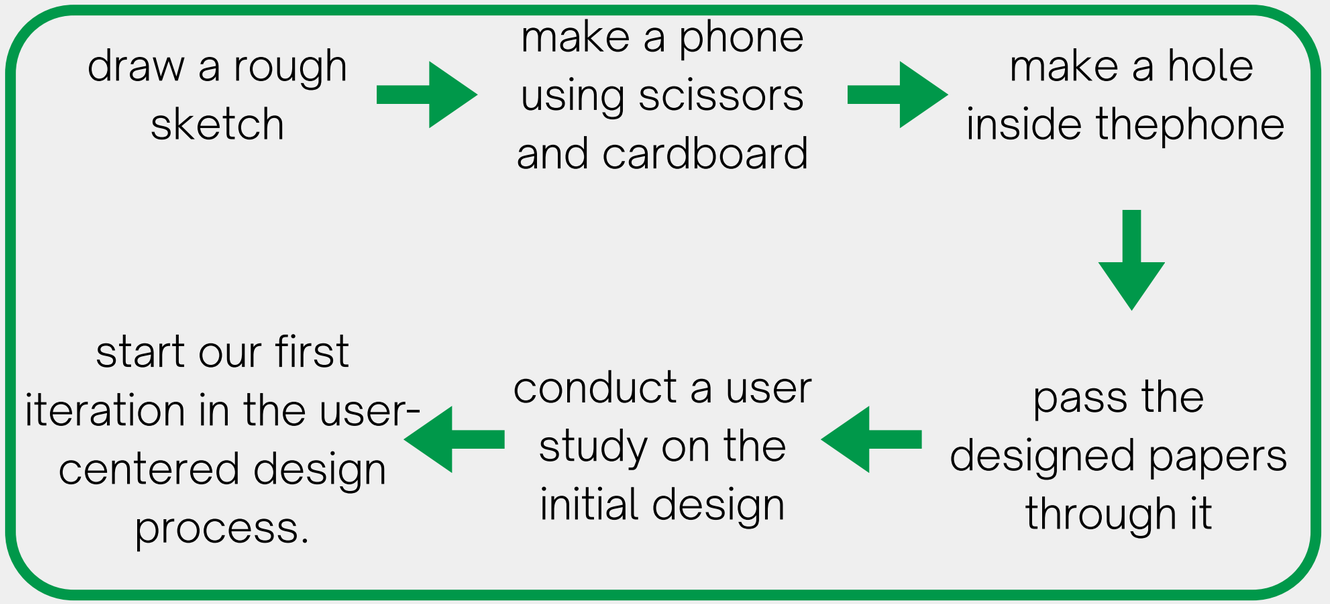
# Prototyping Plan

## 01 Low-fidelity:



# Prototyping Plan

## 02 High-fidelity:

**Tools**:

- High fidelity: Figma, Photoshop, Adobe Illustrator, Flutter, Django, pre-trained AI models

**Duration:**

- **Figma design**: Week 10 ~ 11
- **User study**: Week 11
- **Iteration**: Week 12
- **Front end & Backend development:** Week 12~14
- **User study:** Week 14
- **Finalize the product:** Week 15

# Prototyping Plan

## 02 High-fidelity:

create a High-fi prototype on Figma

user study

modify the design

start building the application

Front end:

- **Flutter**

REST API and the AI model:

- **Django framework**
- **PyTorch**

# Thank You