

Ideation Phase

Brainstorm & Idea Prioritization Template

Date	8 November 2023
Team ID	593161
Project Name	Anticipating Caloric Expenditure With ML
Maximum Marks	4 Marks

Brainstorm & Idea Prioritization Template:


Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions.

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

Reference: <https://www.mural.co/templates/empathy-map-canvas>

Step-1: Team Gathering, Collaboration and Select the Problem Statement

Template



Brainstorm & idea prioritization

⌚ 10 minutes to prepare
🕒 1 hour to collaborate
👤 4 People

➔

Before you collaborate

A little bit of preparation goes a long way with this session. Here's what you need to do to get going.

⌚ 10 minutes

➦

Team gathering

Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.

📌

Set the goal

Think about the problem you'll be focusing on solving in the brainstorming session.

📖

Learn how to use the facilitation tools

Use the Facilitation Superpowers to run a happy and productive session.

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1

Define your problem statement

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

⌚ 5 minutes

Problem

The problem involves the inadequacies of current methods for estimating caloric expenditure, which often fail to adapt to individual variations in lifestyle and metabolism. A solution is sought through the development of a sophisticated machine learning (ML) algorithm that integrates diverse data sources, including physiological metrics, activity levels, and dietary habits. This ML model aims to provide highly accurate and personalized caloric expenditure predictions, fostering proactive health management. Challenges include integrating disparate data types, ensuring scalability and generalizability, and addressing privacy concerns. The ultimate goal is to empower individuals with a dynamic and responsive tool for making informed decisions about nutrition and physical activity, thereby enhancing overall well-being.

Step-2: Brainstorm, Idea Listing and Grouping

2

Brainstorm

Write down any ideas that come to mind that address your problem statement.

10 minutes

Incorporate real-time heart rate data for dynamic caloric expenditure predictions.

Develop a mobile app that uses ML to anticipate daily caloric needs.

Create a wearable device integrating ML for personalized caloric expenditure insights.

Explore ML algorithms to adapt caloric predictions to changing activity patterns.

Utilize machine learning to factor in individual metabolism for accurate predictions.

Implement contextual data analysis in ML models for lifestyle-aware caloric anticipation.

Investigate the feasibility of using ML to anticipate caloric expenditure during exercise.

Develop a cloud-based ML solution for scalable and accessible caloric predictions.

Research ML techniques for overcoming challenges in heterogeneous health data integration.

Design a user-friendly interface for visualizing ML-based caloric expenditure forecasts.

Integrate machine learning with real-time data for comprehensive health management insights.

Shubh Udaybhai Pandya

Yash Dhamecha

Investigate the use of ML-driven caloric prediction for elderly populations.

Explore the impact of ML-driven caloric prediction on preventive healthcare strategies.

Design a predictive analytics system using ML to anticipate caloric needs in advance.

Explore the use of machine learning to personalize caloric predictions for elderly populations.

Enhance the use of ML-driven caloric prediction for elderly populations.

Investigate the integration of sleep data into ML models for more accurate predictions.

Develop an ML-powered virtual assistant for real-time caloric expenditure guidance.

Explore collaborative ML models that leverage social and community health data.

Gaurav Beswal

Chakshu Khanna

Investigate the impact of ML on caloric prediction for weight management outcomes.

Explore the use of machine learning to adapt ML models to individual dietary changes.

Implement reinforcement learning to adapt ML models to individual dietary changes.

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3

Group Ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you can break it up into smaller sub-groups.

20 minutes

Technological Integration:

Incorporate real-time heart rate data for dynamic caloric expenditure predictions.

Develop a mobile app that uses ML to anticipate daily caloric needs.

Create a wearable device integrating ML for personalized caloric expenditure insights.

Develop a cloud-based ML solution for scalable and accessible caloric predictions.

Algorithmic Optimization

Implement contextual data analysis in ML models for lifestyle-aware caloric anticipation.

Investigate ML algorithms that consider environmental factors in caloric expenditure estimations.

Implement reinforcement learning to adapt ML models to individual dietary changes.

Application Focus

Explore collaborative ML models that leverage social and community health data.

Investigate the impact of ML on optimized caloric predictions for weight management outcomes.

Explore the use of machine learning to adapt ML models to individual dietary changes.

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Idea Prioritization

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Step-3: Idea Prioritization

4

Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

🕒 20 minutes

TIP

Participants can use their cursors to point at where sticky notes should go on the grid. The facilitator can confirm the spot by using the laser pointer holding the **H** key on the keyboard.

