1. Brainstorming & Problem Identification

1.1 Context and Motivation

In modern academic environments, the dietary habits of college students have a significant influence on their physical well-being, mental health, and academic performance. With busy schedules, inconsistent meal patterns, and limited nutritional awareness, students often fall into unhealthy eating routines. This challenge presents an opportunity for data-driven intervention.

1.2 Problem Statement

"How can we leverage data visualization tools to monitor, understand, and improve the dietary choices of college students?"

1.3 Project Vision

The project aims to build a comprehensive, interactive dashboard using Tableau, integrated into a Flask-based web platform. This system will visualize complex dietary datasets and help universities:

- Monitor nutrition and health trends in real-time
- Identify unhealthy eating patterns or deficiencies
- Enable predictive planning and personalized interventions
- Support awareness programs and informed resource allocation

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1.4 Brainstorming Questions

During ideation, the following guiding questions shaped the analytical and technical scope of the project:

- What dietary patterns can be identified across student demographics?
- How do lifestyle habits (e.g., cooking, exercise, sleep) correlate with GPA and self-perceived health?
- Can real-time data visualization help in early identification of health issues?
- How can data be used to encourage healthier eating habits institution-wide?

1.5 Tool Selection Rationale

- **Tableau:** For its powerful data visualization, ease of data preparation, and dynamic dashboard creation.
- **Flask:** To create a lightweight yet flexible web interface for hosting the dashboards.
- **CSV Dataset:** A structured and easily readable format for dietary, behavioral, and demographic data.