8. Problem–Solution Fit

8.1 Recap of the Problem

College students face multiple challenges that hinder their ability to maintain a healthy diet, such as:

- **Irregular meal patterns** due to hectic academic schedules
- **Lack of awareness** regarding nutritional values of food
- **Easy access to fast food** and limited affordable healthy alternatives
- **Minimal data-driven support** from institutions to encourage healthier behavior

These issues are not just isolated to individual health but can contribute to reduced academic focus, long-term health problems, and increased pressure on campus health services.

8.2 The Proposed Solution

The solution developed in this project addresses these concerns through an interactive, data-driven platform powered by Tableau and integrated via Flask.

Problem Area	Solution Feature
Unawareness of diet impact	Tableau dashboards visualizing diet vs GPA, exercise, and health perception
Lack of real-time insight	Live and interactive dashboards with filtering by demographics and food habits
No personalized guidance	Visualization of ideal vs actual dietary behavior, enabling self-assessment
Hard to track food trends	Time-based visualizations showing fruit/veggie intake, junk food consumption
No intervention tools for institutions	Admin-level overviews to support awareness campaigns and strategic meal planning

8.3 How the Solution Delivers Fit

Fit Dimension	Explanation
Target User Match	Designed specifically for students, university staff, and campus nutritionists
Insight Accessibility	Visual storytelling converts complex datasets into digestible insights
No Learning Curve	User-friendly dashboards with no login or training required

Fit Dimension	Explanation
Actionability	Enables both self-improvement for students and strategic actions for staff
Scalability	Can be extended with more data, filters, or even personalized student views

8.4 Strategic Value

This solution does more than visualize data — it **empowers decision-making**:

- 🎓 **Students** learn more about their own health habits
- 🏫 **Institutions** gain insights for policy, menus, and campus wellness programs
- 📊 **Data Analysts / Researchers** gain access to structured insights for ongoing study

In essence, the system builds a bridge between data and well-being — making health awareness **visual, personal, and actionable**.