Date	28 June 2025
Team ID	LTVIP2025TMID49154
Project Name	Comprehensive Analysis and Dietary Strategies with Tableau: A College Food Choices Case Study
Maximum Marks	4 Marks

9. Proposed Solution

9.1 Solution Overview

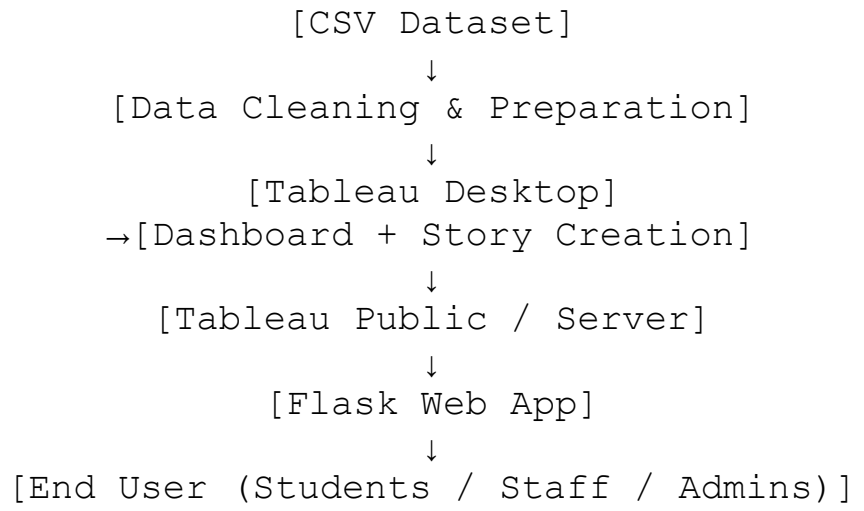
To address the lack of dietary awareness and nutritional insight among college students, this project proposes a **data-driven dietary analysis platform** built using Tableau for visual analytics and Flask for web-based dashboard embedding.

The proposed solution transforms raw CSV data about students' food habits, health perceptions, and lifestyle behaviors into **meaningful visualizations**, making the data actionable and insightful for both individuals and institutional decision-makers.

9.2 Key Solution Components

Component	Description
Tableau Dashboards	Used to build interactive and real-time visuals representing dietary patterns
CSV Dataset	Source of raw data with over 30 columns on food habits, health, and lifestyle
Data Cleaning Module	Optional use of Tableau Prep or Excel to ensure clean, formatted data
Story Boards	Tableau "Story" feature used to create narrative flow across multiple visuals
Flask Integration	Lightweight web application to host and embed the dashboard for browser access

9.3 Functional Architecture



You can optionally convert the above text diagram into a visual one using tools like Lucidchart, Canva, or draw.io.

9.4 Features of the Proposed Solution

Feature	Purpose
✅ **Interactive Filtering**	View trends by gender, GPA, diet type, exercise frequency
✅ **Nutritional Trends Analysis**	Analyze intake of fruits, vegetables, vitamins, and fast foods
✅ **Diet vs. Academic Correlation**	Study how diet affects GPA, healthy feelings, and self-perception
✅ **Storytelling Scenes**	Visual narratives showing evolving trends or comparisons
✅ **Web Embedding**	Dashboard embedded into a Flask web interface for seamless access

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9.5 Benefits of the Proposed Solution

- 📊 **Data-Driven Awareness**: Encourages students to reflect on their food habits
- 🏥 **Institutional Planning**: Helps universities deploy targeted wellness initiatives
- 📈 **Scalability**: The system can be extended with more data fields or updated datasets
- 💻 **Accessibility**: No login or complex setup; dashboards are public and responsive

This solution transforms raw dietary data into a **personalized, visual experience** — providing stakeholders with the tools needed to promote better nutrition, healthier habits, and improved student outcomes.