Design Phase

Team ID: LTVIP2025TMI47618
Project Name: Comprehensive Analysis and Dietary Strategies with Tableau – A College Food Choices Case Study
Maximum Marks: [   ]

Proposed Solution

Problem Recap:
Many college students follow diverse dietary habits, but institutions lack data-driven insights into how those habits correlate with health trends.

Proposed Solution:

Use Python to decode and clean survey data

Design Tableau dashboards with filters for gender, diet, fruit preference, health status

Include Tableau Story to guide interpretation

Embed dashboard in Flask for web access

Expected Impact:

Better awareness for students

Institutions gain data to support health interventions

Interactive, exportable visual reports

Solution Architecture

Layers Overview:

1. **Data Layer:** Raw Excel + codebook → cleaned using Python (`pandas`, `numpy`, `openpyxl`)

2. **Processing Layer:** Python scripts in Jupyter or PyCharm

3. **Visualization Layer:** Tableau with filters and story dashboards

4. **Presentation Layer :** Flask web server to display dashboards

5. **Version Control:** GitHub for all code, data, and dashboards

   1.

Problem-Solution Fit

Problem:
Students lack visibility into how their food choices impact their health. Institutions can't act without insights.

Who Faces It:

1.Students

2.Health officers

3.Cafeteria manager

Why It Matters:

1.Unhealthy habits go unnoticed

2.Data-driven dietary changes are missing

3.There's no current platform for insight

Our Solution:

1.Tableau dashboards with health indicators

2.Data cleaning and decoding pipeline

3.GitHub-based versioning

4.Open-source, updatable design