Technology Stack Report

Date	16 June 2025
Team ID	LTVIP2025TMID49741
Project Name	Comprehensive Analysis and Dietary Strategies with Tableau: A College Food Choices Case Study
Maximum Marks	4 Marks

Data Layer

Component	Description
Dataset	food_coded.csv – structured CSV dataset capturing dietary and health info
Storage Format	Flat file (CSV) loaded locally for analysis
Tools Used	Excel, Python (for cleaning & preprocessing if needed)

Data Processing Layer

Tool/Technology	Purpose
Python (Pandas)	Optional preprocessing: data cleaning, null handling, formatting
Excel	Initial cleaning or quick field review before importing to Tableau

Visualization & Analytics Layer

Tool/Technology	Purpose
Tableau	Main tool for interactive data visualization and dashboard creation
Tableau Features	KPI cards, Bar Charts, Pie Charts, Heatmaps, Highlight Tables, Forecasts
Calculated Fields	Used for: risk group classification, healthy eating score, snack level

User Interaction Layer

Feature	Role
Interactive Dashboards	Users can filter data by gender, risk, and exercise levels

Parameter Controls	Customize target values (e.g., fruit intake threshold)

Feature	Role
Alerts & KPIs	Instant insight into nutrition deficiencies and trends
User Roles	Admin, Nutritionist, Cafeteria Staff – each interacts with filtered views

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Security & Sharing

Feature	Notes
Tableau Public	Public dashboards (for non-sensitive data)
Tableau Server	Optional upgrade for secured, role-based access
Export Options	PDF reports, public link sharing, dashboard embedding

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Justification for Technology Choices

- **Tableau** is chosen for its ease of use, powerful visualization capabilities, and ability to integrate dynamic, calculated insights without extensive coding.
- **CSV Format** keeps the project simple and lightweight for academic or prototype environments.
- **Excel/Python** enables initial analysis and advanced preprocessing before visual design begins.