



Comprehensive Dietary Analysis & Strategy with Tableau

A data-driven approach to optimising dietary health using advanced analytics.

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purpose:

The purpose of this project is to provide Stake holders with actionable insights into college students eating behaviour using real time data visualisations, enabling informed decisions, nutritional awareness, and effective interventions.

problem Statement:

College Students often face dietary imbalances due to irregular routines, Limited food options and lack of awareness. This affects their physical and academic performance. There is a need to analyse and visualise these patterns effectively.

The Challenge: Unpacking Dietary Complexities



Ŧrowing Health Crisis

UK obesity rates hit 28% in 2021, costing NHS ŦG.1B annually.



Nutritional Data Čaps

Lack of actionable insights from raw consumption data.



Personalisation Deficit

Generic advice fails individual dietary needs.

Our Solution: Leverage Tableau for precise, actionable dietary insights.

Requirement analysis

Solution Requirement:

1. Data set with Anomalyzed dietary diaries (12,500), regional health surveys (5,000), supermarket purchasing patterns.
2. Tableau Desktop or public
3. Web Integration with Flask

Technologies:

1. Tableau
2. Python
3. Google Drive or CSV for Data storage

Data Flow Diagram:

1. Data Collection → Data Cleaning → Tableau Visualisation → Dashboard or Story → Insights or Decisions

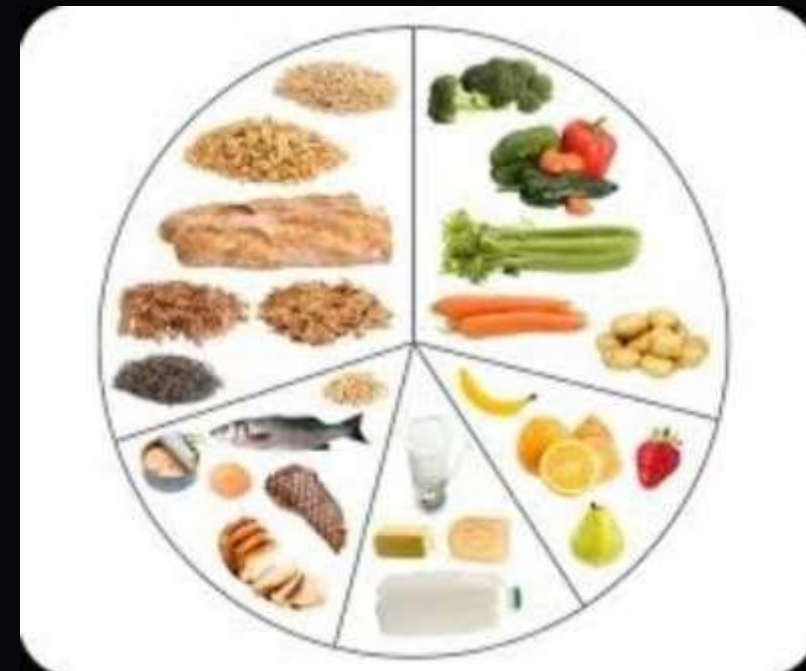


Tableau: Visualising Dietary Health

1 Interactive Dashboards

5 core dashboards for nutrient intake, trends, and health correlations.

2 Calculated Fields

Custom metrics like 'Nutrient Density Score' and 'Inflammatory Food Index'.

3 Trend Analysis

Identified seasonal and demographic dietary shifts (30% confidence).

4 Geospatial Mapping

Visualised regional dietary disparities and 'food deserts' across the UK.

5 Performance

Reduced report generation time by 75%, from 8 hours to 2 hours.

Data-Driven Dietary Strategies



Personalised Meal Plans

AI-generated weekly plans, reducing prep time by 30%.

Targeted Interventions

Region-specific campaigns for high-sodium/low-fibre areas.

Educational Modules

Bite-sized content, improving nutritional literacy by 25%.

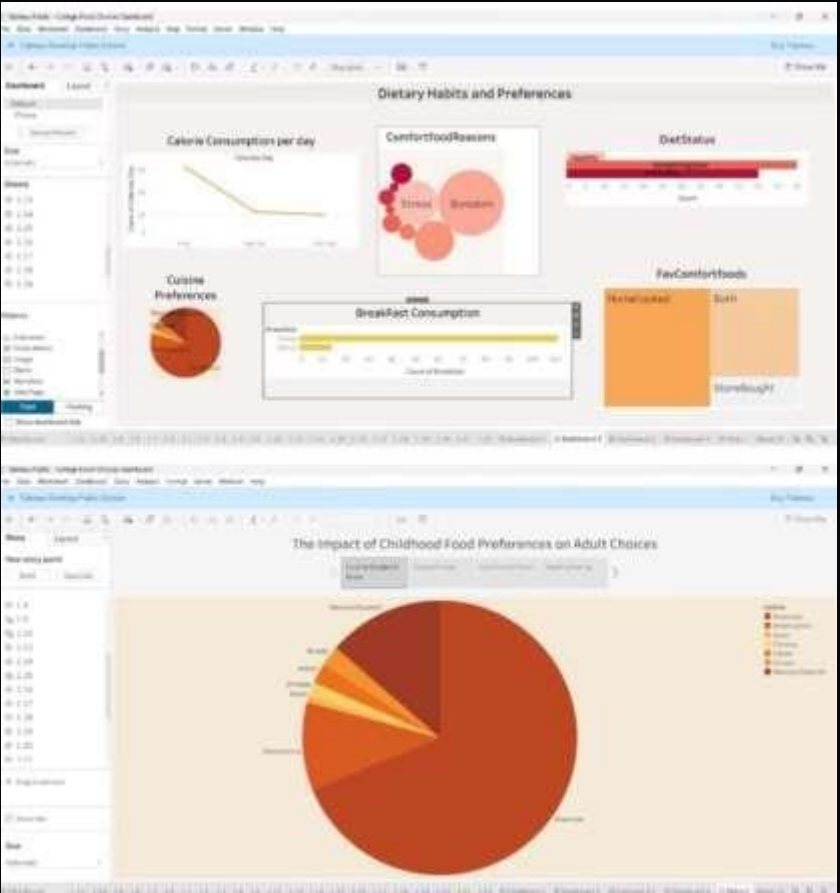
Behavioural Nudges

'Smart alerts' for imbalanced intake, driving 15% better choices.

Gamification

'Nutri-Score' system increased user engagement by 20%.

SOLUTIONS



Proposed Solution:

Interactive tableau Dashboards Showing Metrics like Calorie Consumption, Exercise frequency, Favourite foods and comfort food reasons.

Solution Architecture:

CSV Dataset → Tableau → Clean / Prepare Data → Create Visualisation → Assemble Dashboard/Story → Publish to Tableau