

Final Report - College Food Choices Case Study

1. INTRODUCTION

1.1 Project Overview

This project explores college students' food preferences using a dataset rendered in Tableau. It includes analysis of calorie estimation, cooking frequency, dietary changes, and comfort food reasoning.

1.2 Purpose

To understand the health awareness, dietary behavior, and cultural food preferences of college students through visual analytics.

2. IDEATION PHASE

2.1 Problem Statement

College students often face poor eating habits due to time constraints and emotional stress.

2.2 Empathy Map Canvas

Students feel stressed, miss home-cooked food, and often rely on fast food due to convenience.

2.3 Brainstorming

Possible insights included GPA vs. food quality, frequency of cooking vs. eating out, and cultural food preferences.

3. REQUIREMENT ANALYSIS

3.1 Customer Journey map

From filling out surveys to viewing analyzed dashboards.

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3.2 Solution Requirement

Functional: Dashboard interaction, filtering, calculated fields.

Non-Functional: Usability, availability, performance, scalability (from Solution Requirements doc).

3.3 Data Flow Diagram

Survey data ? Cleaned in Tableau ? Visualized as dashboards ? Interacted with via filters.

3.4 Technology Stack

Tableau Public, Calculated Fields, Local CSV file, No cloud DB or APIs used.

4. PROJECT DESIGN

4.1 Problem Solution Fit

Dashboards allow students and stakeholders to visualize behavioral trends clearly.

4.2 Proposed Solution

Create multiple Tableau dashboards and a story showing food behaviors and comfort food patterns.

4.3 Solution Architecture

CSV file ? Tableau ? Calculated Fields & Filters ? Dashboard/Story on Tableau Public.

5. PROJECT PLANNING & SCHEDULING

5.1 Project Planning

Week 1: Dataset understanding

Week 2: Cleaning & preprocessing

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Week 3: Visualization building

Week 4: Dashboard design & publishing

Week 5: Report creation.

6. FUNCTIONAL AND PERFORMANCE TESTING

6.1 Performance Testing

Dashboards were optimized for quick loading (<3 seconds per chart), even with filters applied.

7. RESULTS

7.1 Output Screenshots

Included visualizations:

- Bar chart (cooking frequency)
- Pie chart (employment status)
- Line chart (exercise vs. GPA)
- Heatmaps (comfort food reasons)
- Filter-enabled dashboards.

8. ADVANTAGES & DISADVANTAGES

Advantages:

- Interactive, user-friendly
- Quick deployment
- No coding needed

Disadvantages:

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- Limited data processing
- No built-in machine learning.

9. CONCLUSION

This project demonstrates how data visualization with Tableau can reveal key trends in college dietary habits.

10. FUTURE SCOPE

Add NLP models for open-ended text analysis

Integrate real-time food tracking apps

Enhance interactivity with filters.

11. APPENDIX

Source Code: N/A

Dataset Link: food_coded.csv (local)

GitHub: N/A

Project Demo: Tableau Public (if link provided)