Infosys | Springboard

Internship Program

## Internship 6.0

# Food Trends Understanding Customer Preferences in Food & Beverage

# TEAM MEMBERS

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# INTRODUCTION

- The project focuses on analyzing customer **food preferences** and **dietary habits.**
- The dataset includes attributes such as **age, gender, activity level, dietary preference, calories, nutrients, diseases, price, and ratings**.
- Objective: To gain insights into how **lifestyle, diet type, and pricing** impact **food choices and nutritional balance.**
- Additionally, the project aims to identify patterns that can help **recommend healthier and more cost-effective meal** options for different customer segments.

# DATASET OVERVIEW

- **Demographics:** Age, Gender, Height, Weight
- **Lifestyle:** Activity Level, Daily Calorie Target
- **Nutrition:** Protein, Fat, Carbohydrates, Sugar, Fiber, Sodium, Calories
- **Food Suggestions:** Breakfast, Lunch, Dinner, Snack
- **Health & Cost:** Diseases, Price, Rating

Dataset was analyzed using Power BI to create **interactive dashboards** for trend analysis.

# FOOD TRENDS OVERVIEW

## Food Trends Understanding Customer Preferences

Ages
35 67

Gender
Female Male

Sum of Protein, Sum of Fat and Sum of Carbohydrates
70K (30.36%)
126K (54.61%)
35K (15.04%)
Sum of ...
Sum of ...
Sum of ...

Sum of Daily Calorie...
1M

Dietary Prefer...
All
Omnivore
Pescatarian
Vegan
Vegetarian

| Lunch Suggestion | Sum c |
|---|---|
| Veggie stir-fry | 11 |
| Vegetarian pasta with marinara sa | |
| Vegetarian chili with a side of whc | |
| Vegetarian burrito bowl with brov | |
| Vegan lentil stew with brown rice | |
| Turkey sandwich with whole-wheat bread | |
| Turkey sandwich on whole-wheat bread with vegetables | |
| Turkey sandwich on whole-wheat bread with salad | |
| Turkey sandwich on whole-wheat bread | |
| Turkey sandwich on whole wheat bread with vegetables | |
| Turkey sandwich on whole grain bread | |
| Turkey sandwich | 7 |
| **Total** | **1,07** |

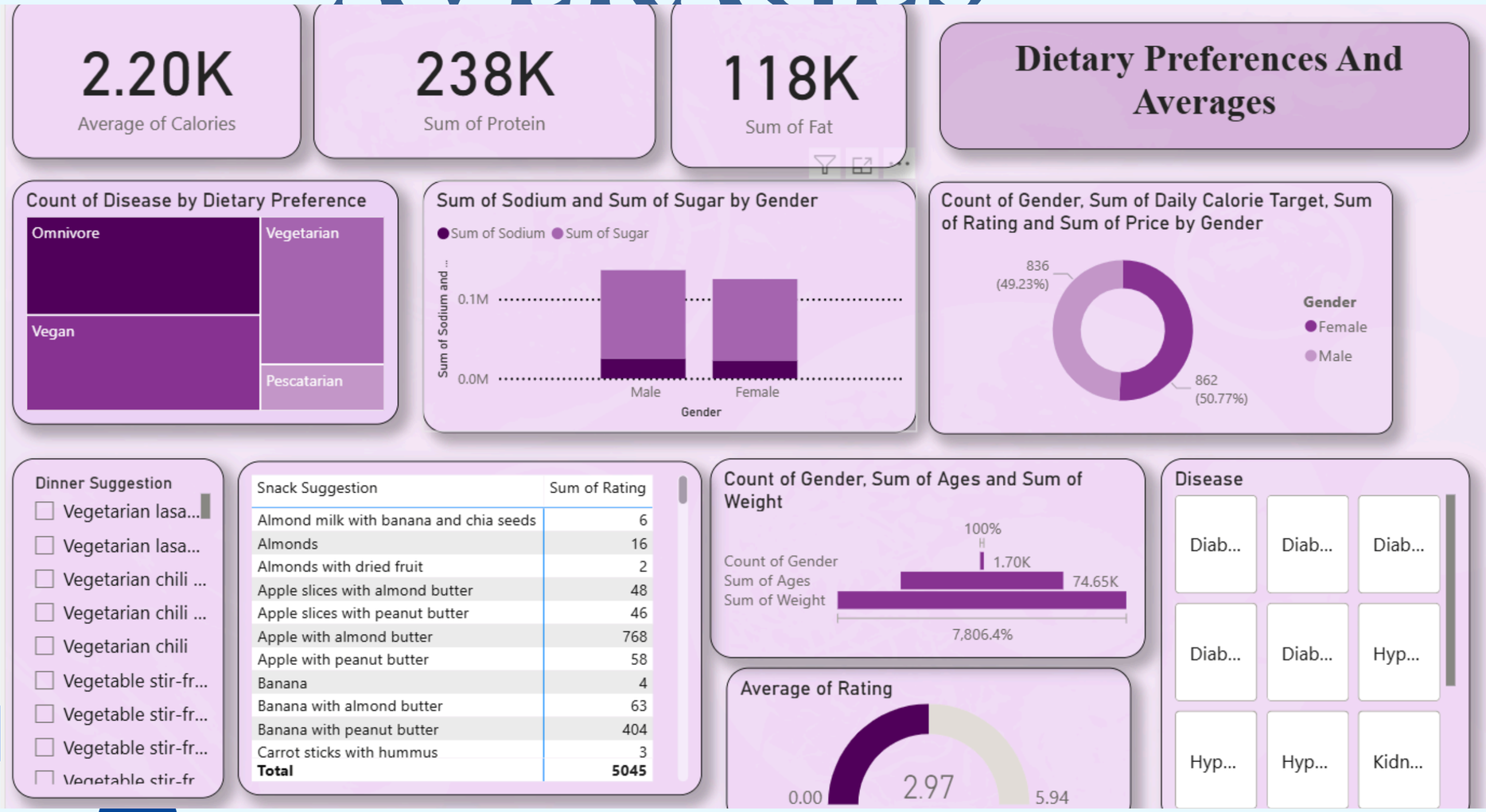
| Breakfast Suggestion | Sum of Rating |
|---|---|
| Yogurt with granola and fruit | 6 |
| Yogurt with fruit and granola | 5 |
| Whole-wheat toast with egg and avocado | 3 |
| Wholegrain toast with avocado | 5 |
| Vegan pancakes with syrup | 99 |
| Tofu scramble with whole-wheat toast | 2 |
| Tofu scramble with whole wheat toast and fruit | 11 |
| Tofu scramble with whole wheat toast | 1 |
| Tofu scramble with veggies and whole-wheat toast | 6 |
| Tofu scramble with veggies | 134 |
| Tofu scramble with vegetables and whole-wheat toast | 9 |
| **Total** | **1433** |

Sum of Fiber, Sum of Sugar and Sum of Sodium
14K (15.21%)
15.15K (16.41%)
63K (68.38%)
Sum of Fi...
Sum of S...
Sum of S...

Filters

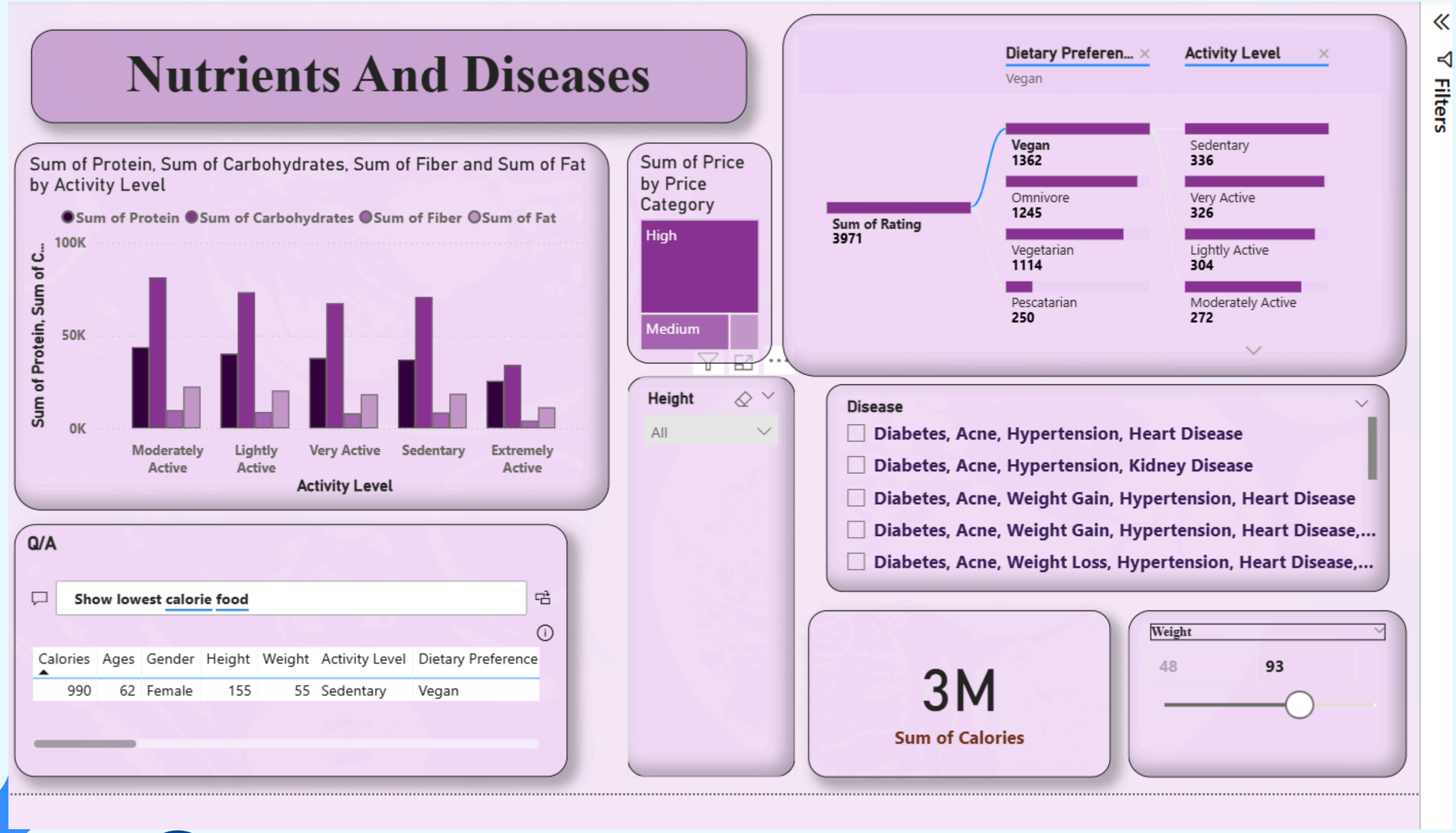
- customers fall in the **18–79 age group**.
- Gender distribution is nearly balanced.
- **Total calorie intake:** 1M+
- Donut charts show proportions of macronutrients (Protein, Fat, Carbs).
- **Top Lunch Suggestions:** Veggie stir-fry, Vegetarian chili, and Vegetarian Pasta
- High-rated breakfast items include **tofu scramble** and **vegan pancakes**.

# DIETARY PREFERENCES & AVERAGES



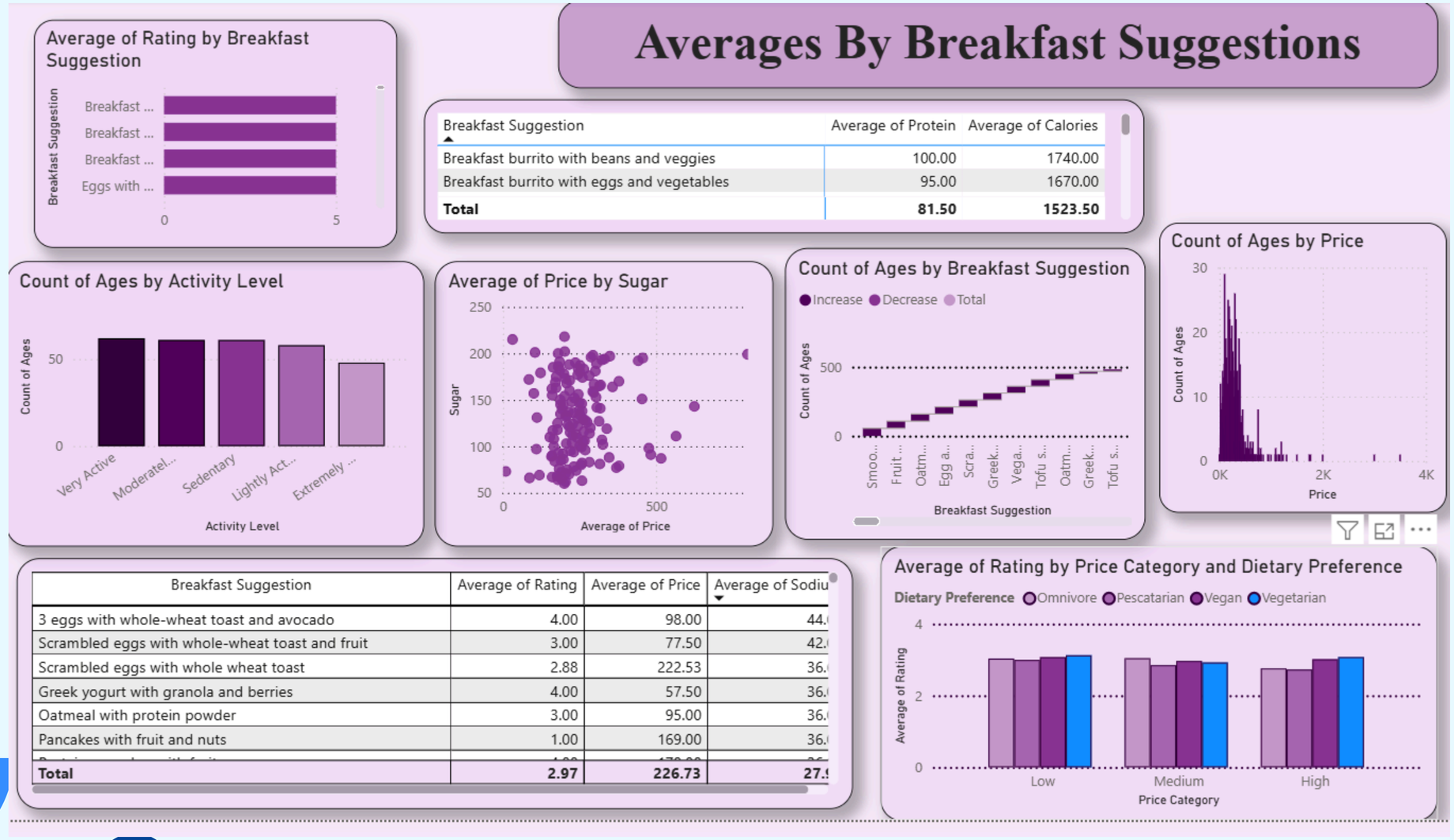
- Highest calorie average: **2.2K**
- Protein and fat intake analyzed by gender.
- Omnivores have higher disease counts compared to vegans and vegetarians.
- Females and males show similar calorie target adherence (around 50% each).
- **Average Rating:** ~3, showing moderate satisfaction across diets.

# NUTRIENTS & DISEASES



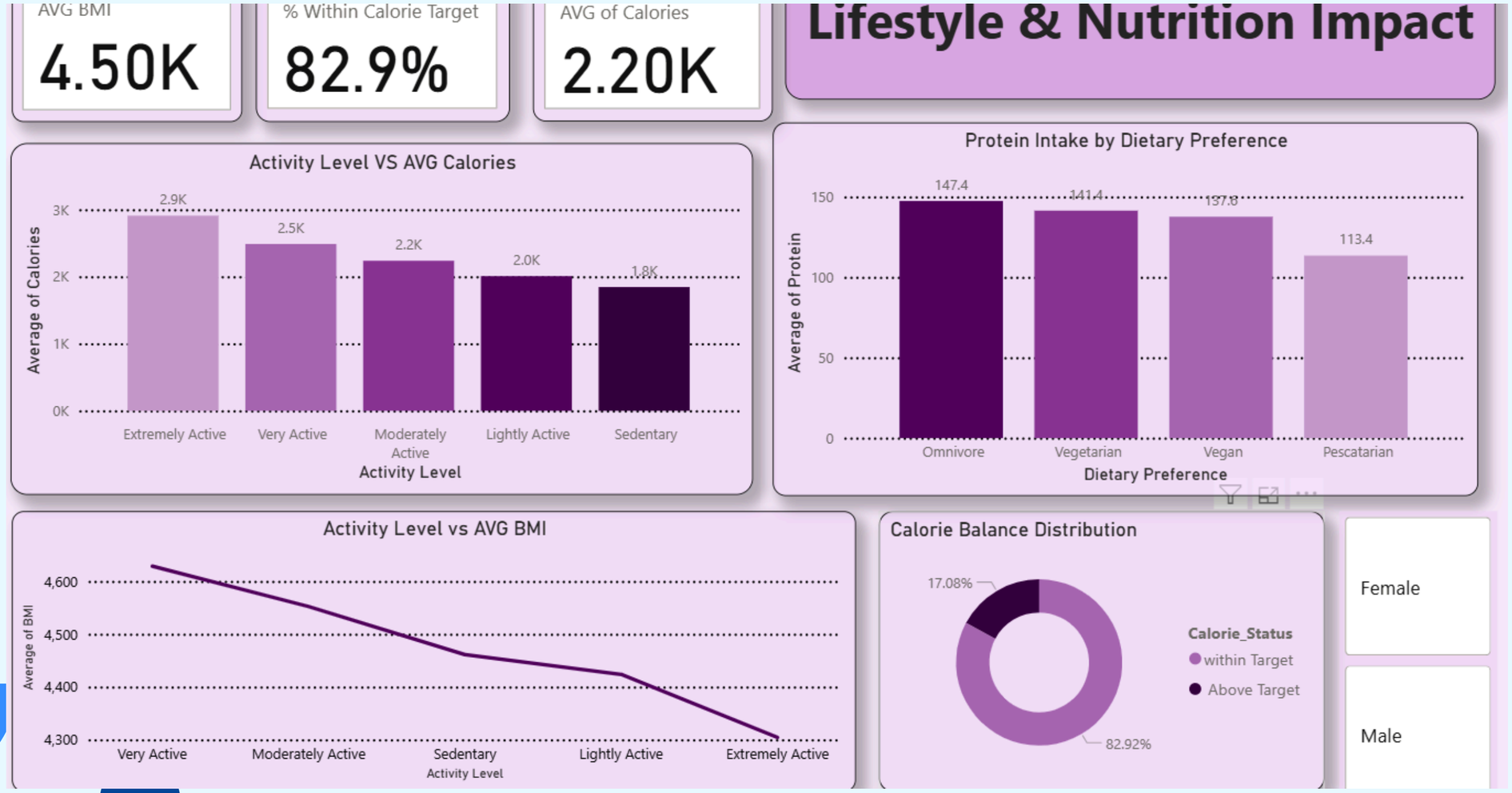
- Nutrient distribution analyzed by **activity level** (Sedentary to Extremely Active).
- Highly active individuals consume more protein and carbohydrates.
- Disease patterns reveal correlation between **sedentary lifestyle and conditions** like diabetes, hypertension, and obesity.
- **Q&A feature** used for interactive queries like “Show lowest calorie food.”
- Height ranges from 150 to 200 CM

# BREAKFAST ANALYSIS



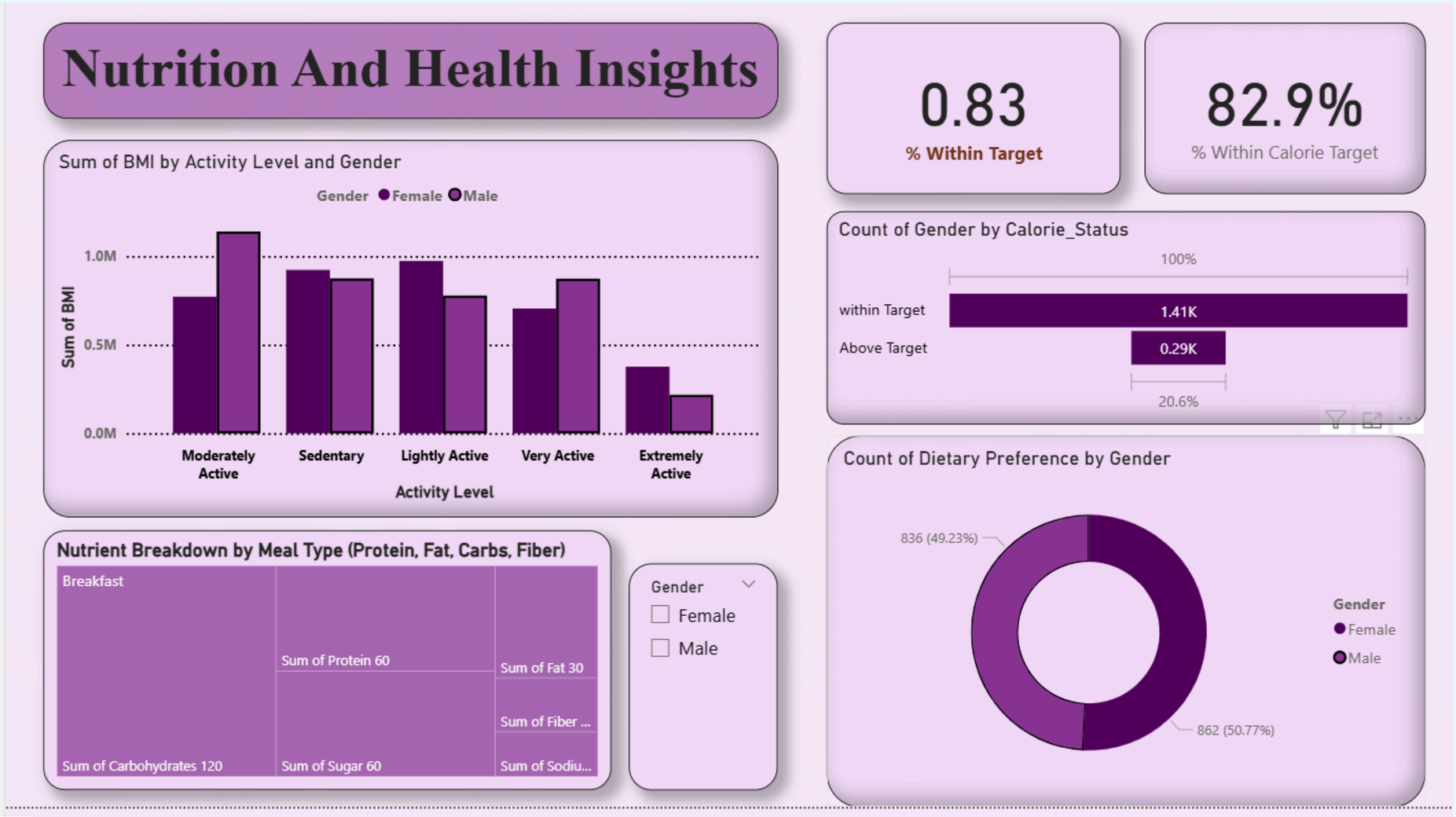
- Breakfast suggestions were analyzed by **rating, price, calorie, and nutrient composition**.
- "**Breakfast burrito with beans and veggies**" shows the **highest nutrition value** with **100 g protein** and **1740 calories**.
- The **scatter plot of sugar vs. price** shows that most items cluster in the **average price range**, confirming a balance between sweetness and affordability.
- **Omnivore and vegetarian options** tend to receive slightly **higher ratings in low-price categories**, indicating strong satisfaction even at lower cost.
- **Count-of-ages by activity level** shows breakfast popularity is highest among **moderately and very active individuals**.

# LIFESTYLE & NUTRITION IMPACT



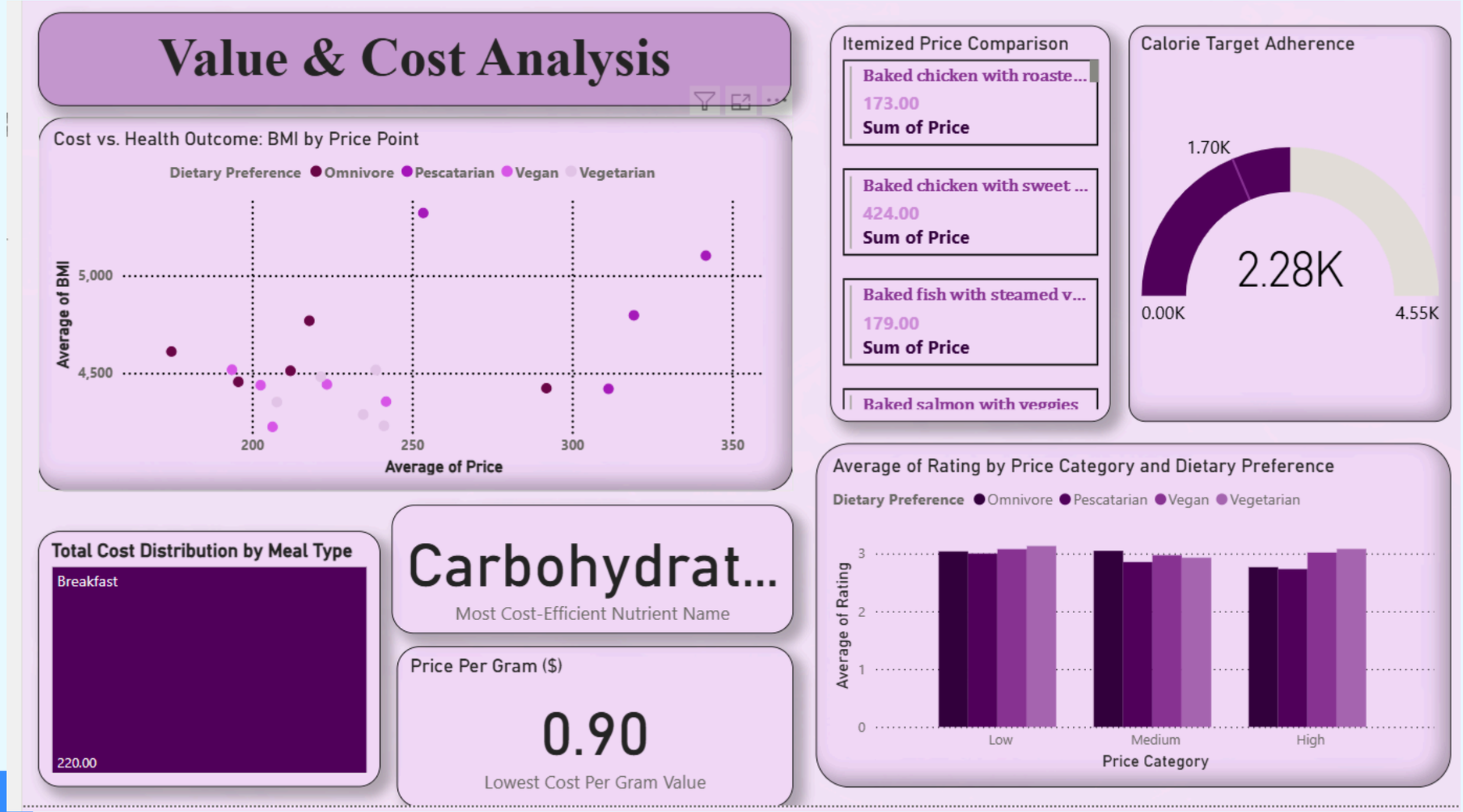
- Relationship between activity level, calories, BMI, and dietary preference.
- Highly active individuals maintain better BMI and balanced calorie intake.
- Protein intake highest among omnivores, followed by vegetarians.
- Over **82.9%** of participants are within their calorie target.
- As **activity level increases**, average BMI tends to **decrease**, showing a clear connection between fitness and healthy body composition.

# Nutrition & Health Insights



- BMI comparison by **gender and activity level**.
- Males show slightly higher BMI in sedentary categories.
- Nutrient breakdown highlights **carbs and protein** as major contributors.
- Donut chart shows near-equal distribution of **dietary preference by gender**.

# VALUE & COST ANALYSIS



- Comparison of **BMI vs. Price Point** for different diet types.
- **Carbohydrates** identified as the **most cost-efficient nutrient** (lowest cost per gram = 0.90$).
- Vegetarian meals show **high ratings** even at low and medium price ranges.
- Cost-efficient meals can maintain health balance without overspending.

# CONCLUSION

- Consumers prefer **balanced, moderately priced meals**.
- **Vegans and vegetarians** show better calorie control and disease management.
- **Activity level** directly affects calorie and BMI balance.
- Nutritional awareness is higher in people following **custom diet plans**.
- The dashboards help visualize relationships between **food choice, cost, and health** for data-driven insights.

# FUTURE SCOPE

- Integrate **real-time food tracking** and customer feedback analytics.
- Predict **personalized meal plans** using machine learning.
- Extend research to include **regional food preferences**.
- Develop a **mobile dashboard** for interactive health insights.
- Implement **AI-driven recommendations** for pricing and menu optimization.

# THANK YOU !