

Internship 6.0

Food Trends Understanding Customer Preferences in Food & Beverage

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INTRODUCTION

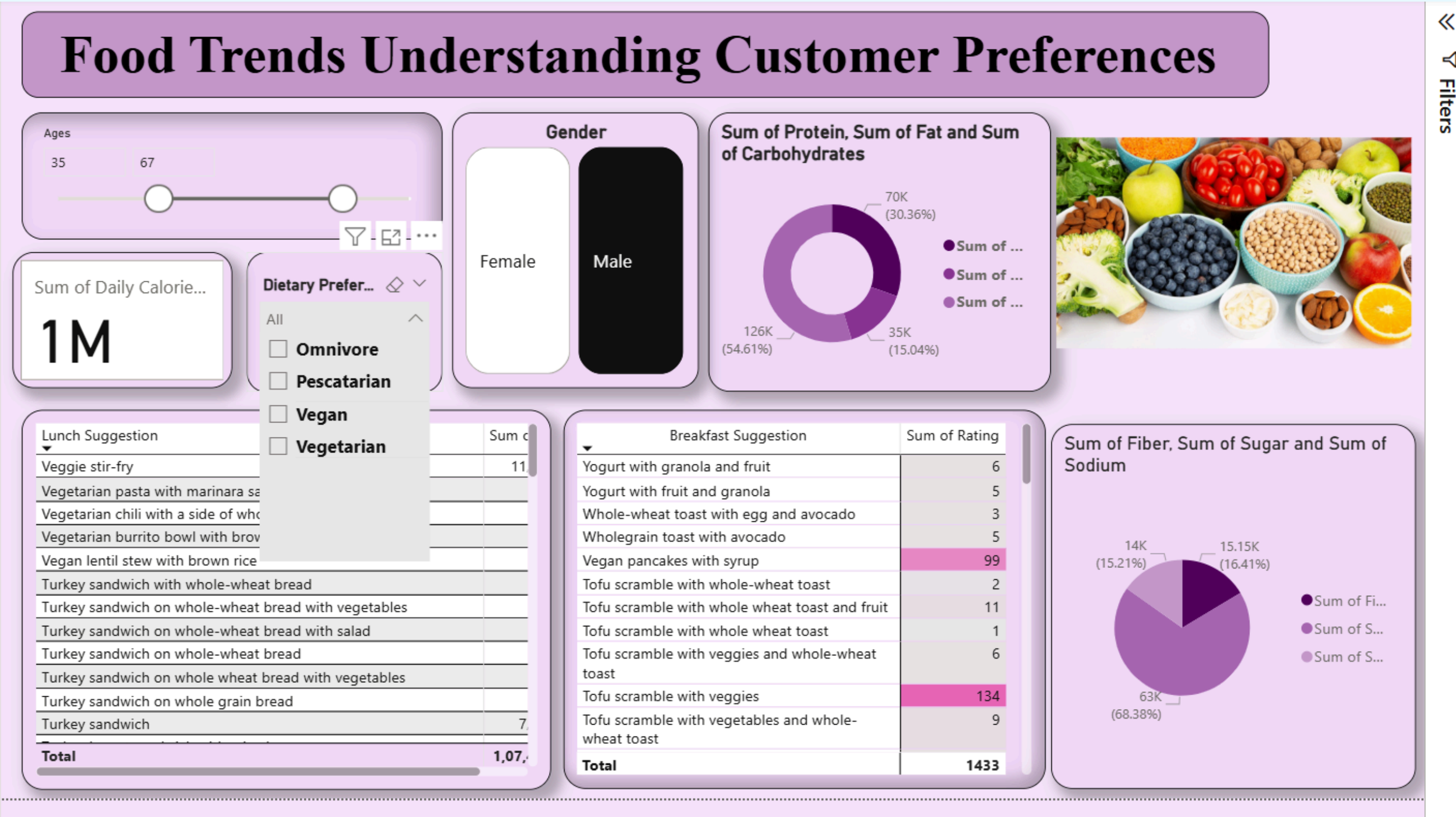
- The project focuses on analyzing customer **food preferences** and **dietary habits**.
- The dataset includes attributes such as **age, gender, activity level, dietary preference, calories, nutrients, diseases, price, and ratings**.
- Objective: To gain insights into how **lifestyle, diet type, and 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

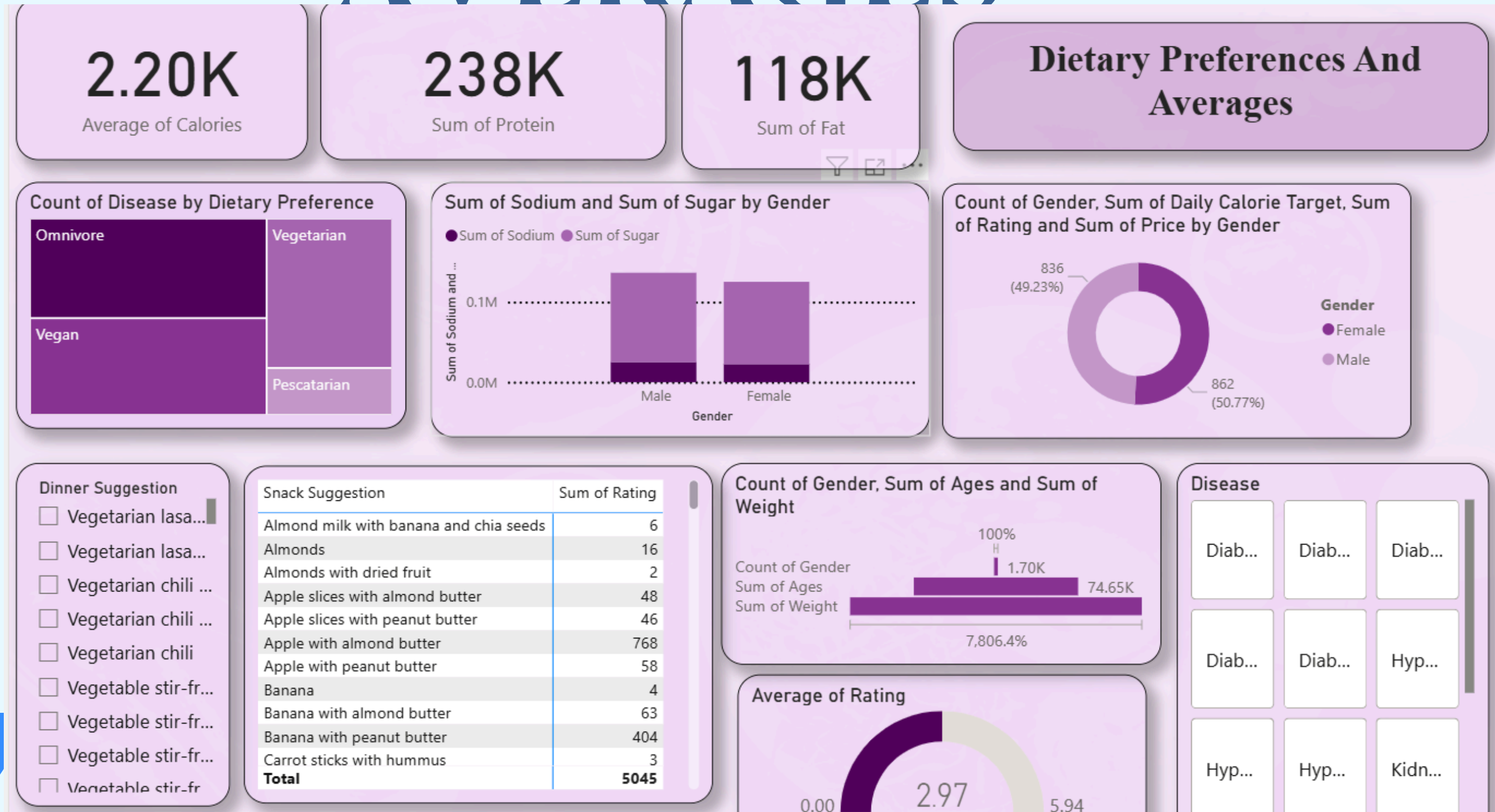
Dataset was analyzed using Power BI to create **interactive dashboards** for trend analysis.

FOOD TRENDS OVERVIEW



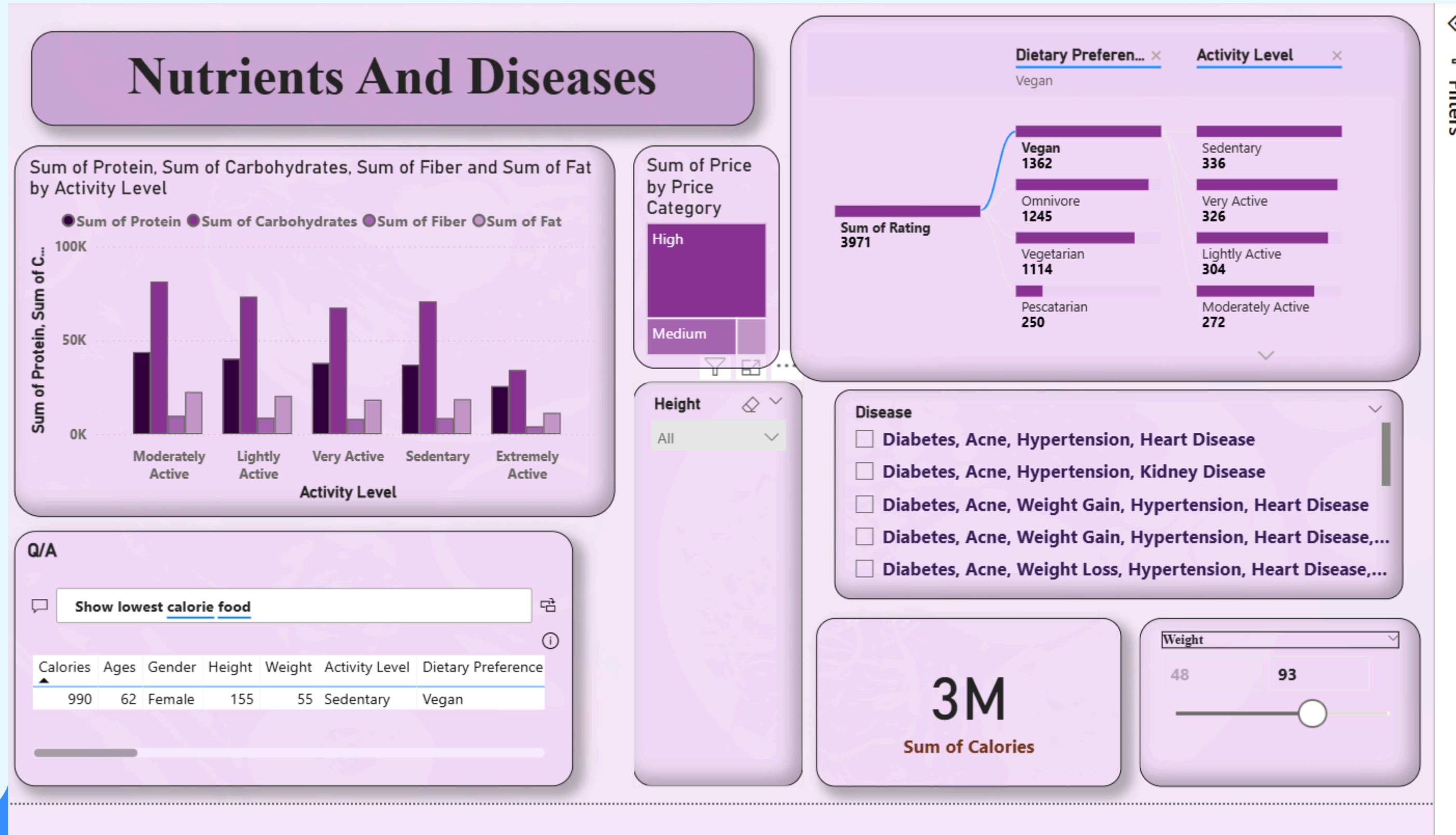
- customers fall in the **18–79 age group**.
- Gender distribution is nearly balanced.
- **Total calorie intake:** 1M+
- Donut charts show proportions of macronutrients (Protein, Fat, Carbs).
- **Top Lunch Suggestions:** Veggie stir-fry, Vegetarian chili, and Vegetarian Pasta
- High-rated breakfast items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

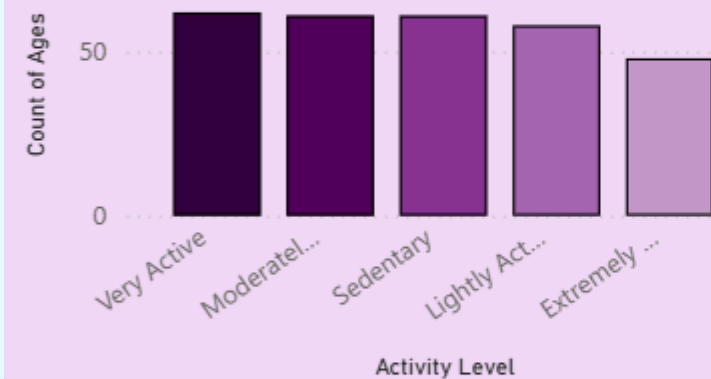
Averages By Breakfast Suggestions

Average of Rating by Breakfast Suggestion

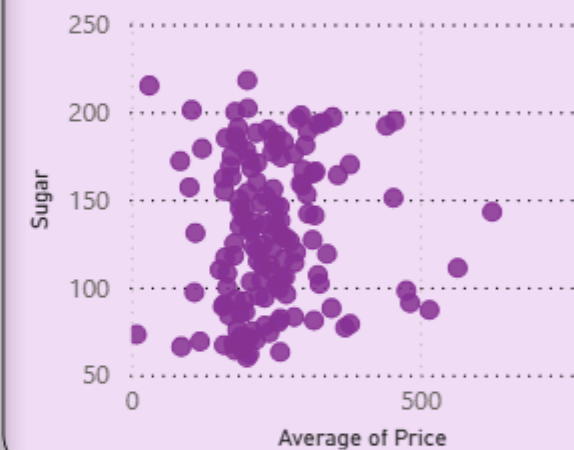


Breakfast Suggestion	Average of Protein	Average of Calories
Breakfast burrito with beans and veggies	100.00	1740.00
Breakfast burrito with eggs and vegetables	95.00	1670.00
Breakfast burrito with fruit and nuts	81.50	1523.50
Total	81.50	1523.50

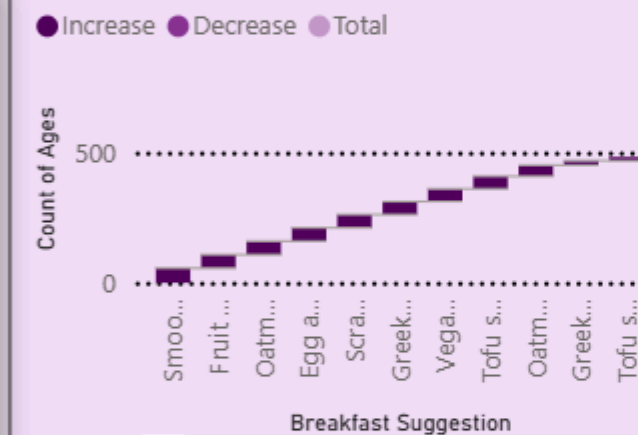
Count of Ages by Activity Level



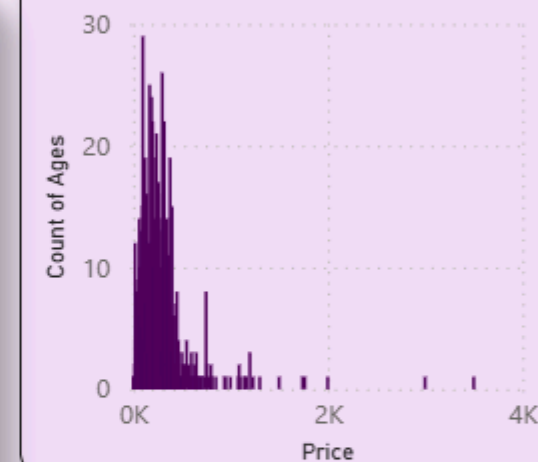
Average of Price by Sugar



Count of Ages by Breakfast Suggestion



Count of Ages by Price



Breakfast Suggestion	Average of Rating	Average of Price	Average of Sodium
3 eggs with whole-wheat toast and avocado	4.00	98.00	44.00
Scrambled eggs with whole-wheat toast and fruit	3.00	77.50	42.00
Scrambled eggs with whole wheat toast	2.88	222.53	36.00
Greek yogurt with granola and berries	4.00	57.50	36.00
Oatmeal with protein powder	3.00	95.00	36.00
Pancakes with fruit and nuts	1.00	169.00	36.00
Total	2.97	226.73	27.00

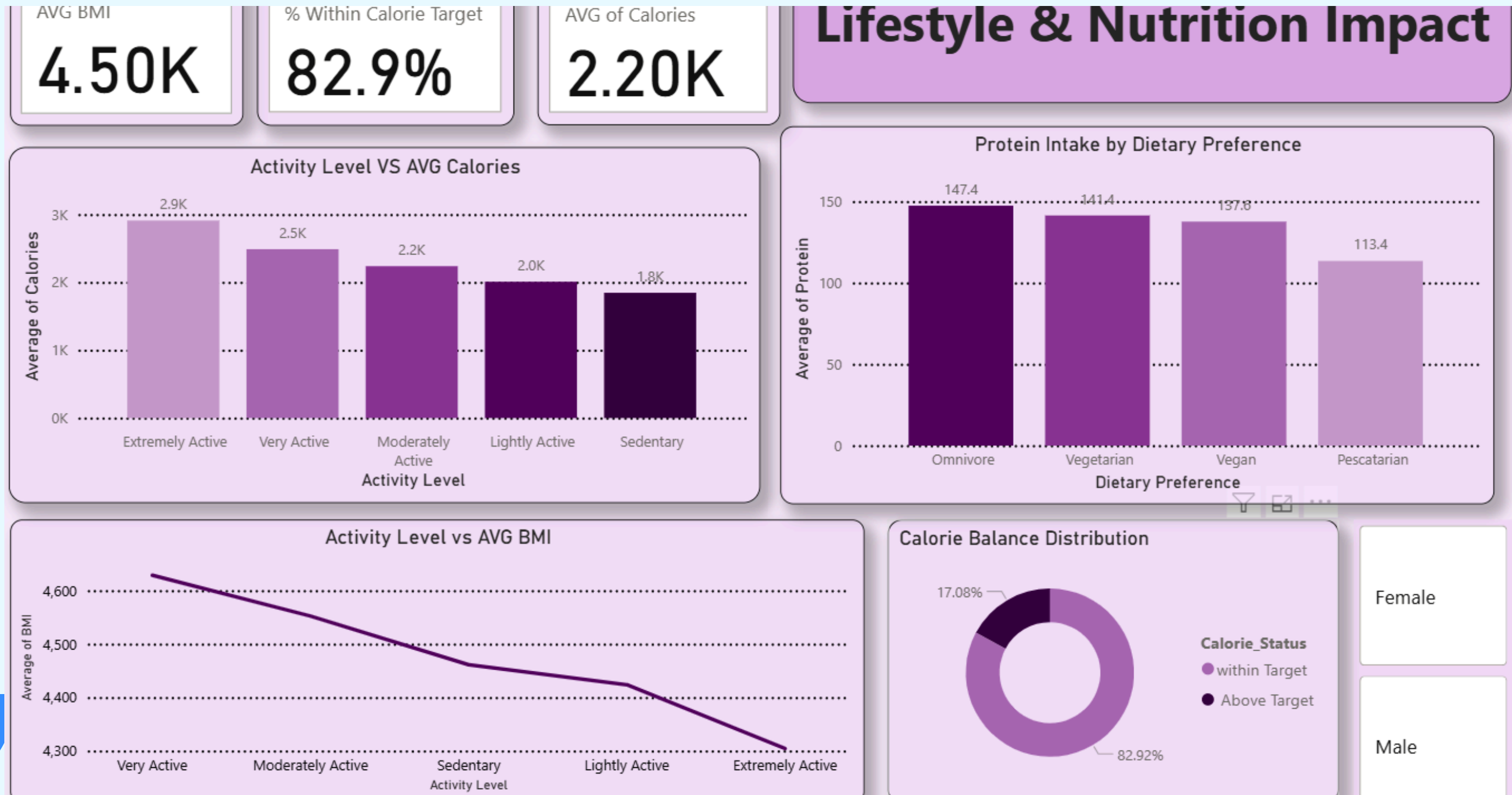
Average of Rating by Price Category and Dietary Preference



- 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

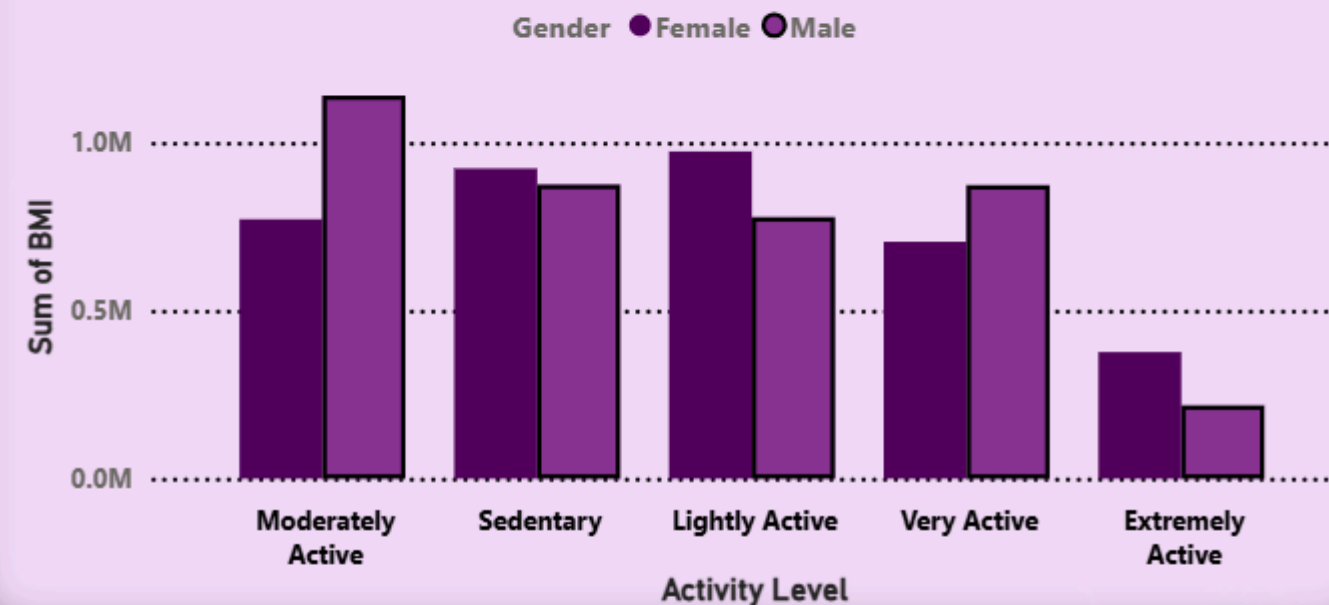


- Relationship between activity level, calories, BMI, and dietary preference.
- Highly active individuals maintain better BMI and balanced calorie intake.
- Protein intake highest among omnivores, followed by vegetarians.
- Over **82.9%** of participants are within their calorie target.
- As **activity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

Nutrition & Health Insights

Nutrition And Health Insights

Sum of BMI by Activity Level and Gender



Nutrient Breakdown by Meal Type (Protein, Fat, Carbs, Fiber)



Gender

Female

Male

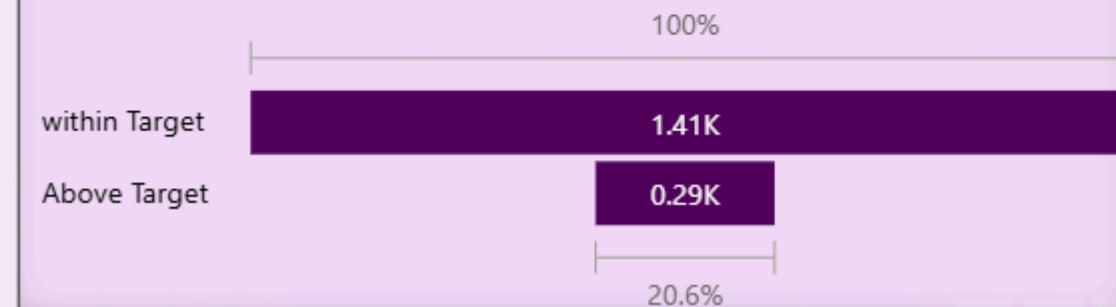
0.83

% Within Target

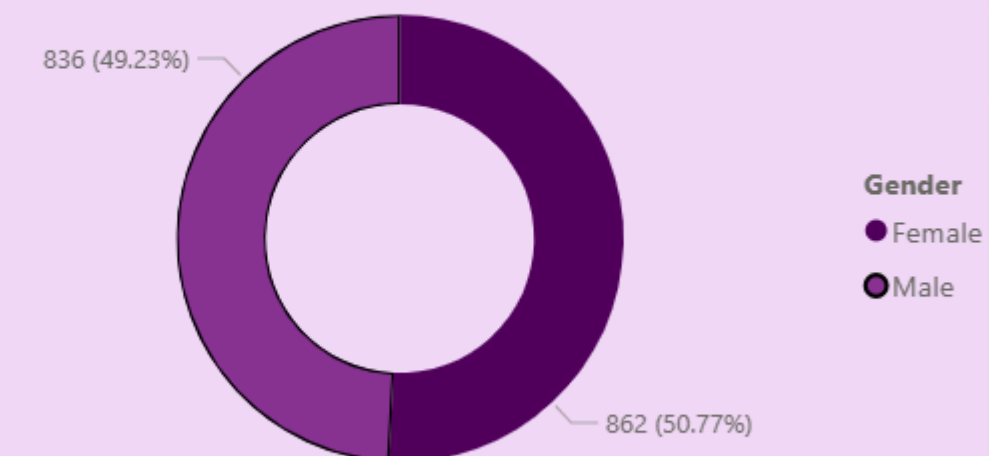
82.9%

% Within Calorie Target

Count of Gender by Calorie_Status

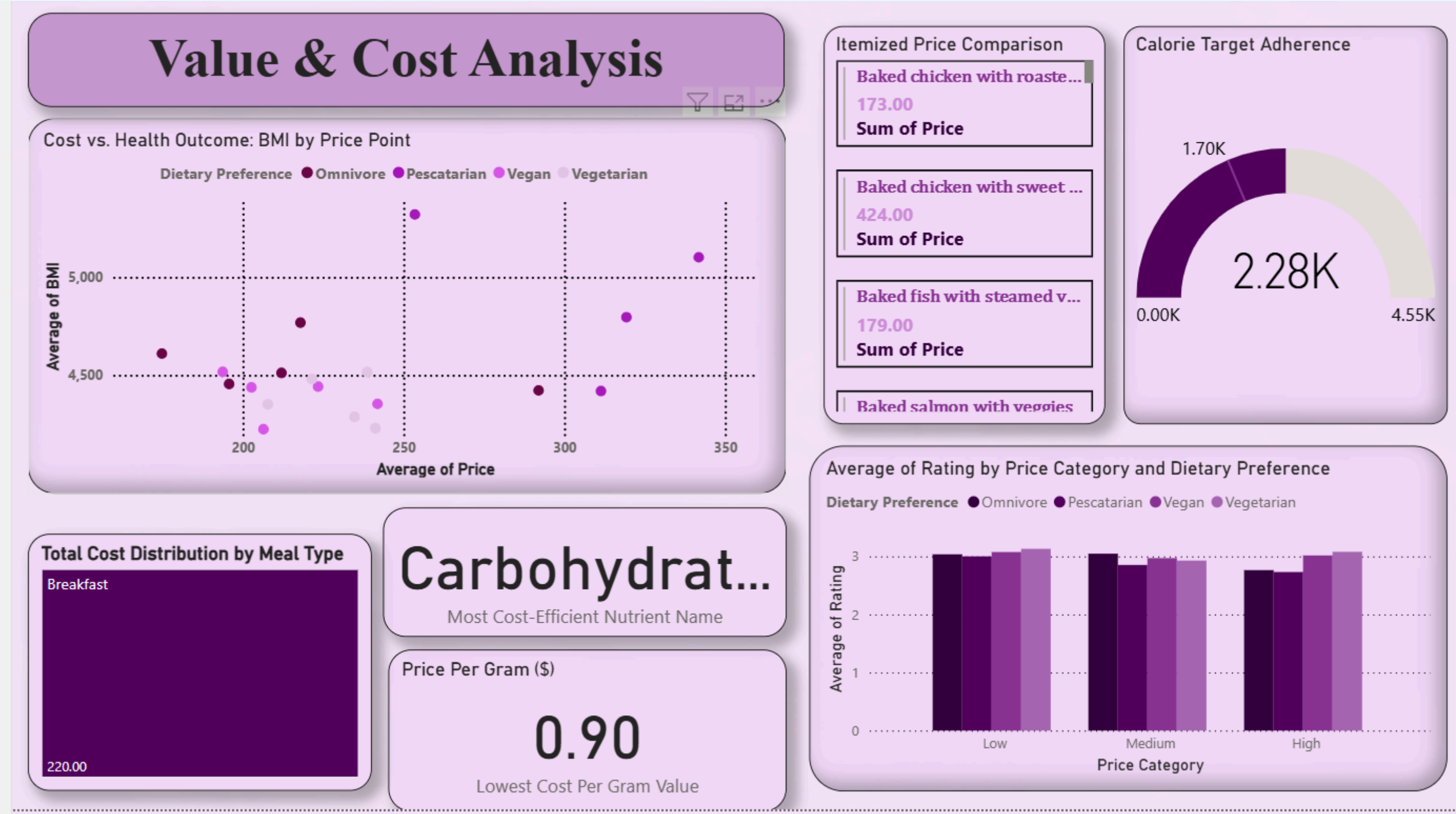


Count of Dietary Preference by Gender



- 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 !