

Coding Challenge: *Impact of Eating Out on Health*

Use Power BI to analyze how eating out frequency affects health indicators (BMI, cholesterol, blood pressure, and lifestyle). Build **dashboards** to reveal insights and patterns.

Dataset Structure

- **Person_ID** – Unique ID
- **Age** – 18 to 60
- **Gender** – Male/Female
- **Occupation** – Student, Employee, Business, Freelancer
- **Eat_Out_Frequency** – 0 to 7 times per week
- **Preferred_EatOut_Type** – FastFood, CasualDining, StreetFood, HealthyCafe
- **Daily_Calories** – 1600–3500 kcal
- **Exercise_Hours_Per_Week** – 0–10 hours
- **Sleep_Hours** – 4–9 hours
- **BMI** – Derived from calories & exercise
- **BloodPressure** – Normal, PreHypertension, Hypertension
- **Cholesterol_Level** – Normal, Borderline, High
- **Diabetes** – Yes/No
- **Health_Score** – 20–95 scale

Tasks

1. Data Cleaning & Modeling

- Import dataset into Power BI.
- Create relationships if multiple tables are used (demographics, lifestyle, health).
- Ensure correct data types (numeric vs categorical).

2. KPI Cards

- Avg Eat-Out Frequency.
- Avg Health Score.

- % of People with Diabetes.
- % of People with Hypertension.

3. Visuals

- **Bar Chart:** Eat_Out_Frequency vs Avg BMI.
- **Stacked Column:** Preferred_EatOut_Type vs Cholesterol Levels.
- **Scatter Plot:** Daily Calories vs Health Score (size = Exercise Hours).
- **Line Chart:** Eat_Out_Frequency vs Avg Health Score (by Age Group).
- **Pie Chart:** Distribution of Eating Out Types.

4. DAX Measures

- Avg_BMI
- High_Risk_Count
- EatOut_Impact

5. Conditional Formatting

- Highlight people with **Health Score < 50** in red.
- Color-code Cholesterol Level (Normal = Green, Borderline = Yellow, High = Red).

6. Dashboard Deliverable

- Page 1: *Overview (KPIs + High-Level Insights).*
- Page 2: *Eating Out vs Health Trends.*
- Page 3: *Demographics & Lifestyle Insights.*

Example Insights Might Discover

- Eating out **5+ times/week** correlates with **higher BMI and cholesterol**.
- Fast food lovers show **lower average health scores** compared to healthy café goers.
- People exercising **>4 hours/week** balance the negative impact of frequent eating out.
- Students and young professionals have the **highest eating out frequency** but also show **poorer sleep patterns**.