

## Data Description

The dataset contains information related to personal healthcare expenditure on insurance, where each record represents an individual and their associated health and demographic data. Here's a brief description of the columns:

1. **Age:** The age of the individual.
2. **Sex:** The gender of the individual (typically represented as male or female).
3. **BMI:** Body Mass Index, a value derived from the height and weight of the individual, indicating whether they are underweight, normal weight, overweight, or obese.
4. **Children:** The number of children or dependents covered under the individual's insurance plan.
5. **Smoker:** Indicates whether the individual is a smoker (typically yes or no).
6. **Region:** The geographical region where the individual resides.
7. **Charges:** The medical charges billed to the individual or the insurance cost associated with their healthcare.

## Requirements

As a Data Analyst, you are required to answer any 6 of the following questions and create an appealing dashboard using any tool of your choice:

1. **What is the Distribution of Medical Charges Across Different Age Groups?**
  - **Purpose:** To visualize how medical charges vary with age, helping to identify age groups that incur higher healthcare costs.
2. **How Does Smoking Affect Medical Charges?**
  - **Purpose:** To compare the average medical charges between smokers and non-smokers, highlighting the financial impact of smoking.
3. **What is the Relationship Between BMI and Medical Charges?**
  - **Purpose:** To analyze how Body Mass Index correlates with medical charges, potentially indicating higher costs for individuals with higher BMI.
4. **Which Regions Have the Highest Average Medical Charges?**
  - **Purpose:** To determine which geographical regions have higher healthcare costs, aiding in regional policy-making and resource allocation.
5. **How Do Medical Charges Vary by Gender?**
  - **Purpose:** To see if there is a significant difference in medical charges between males and females.
6. **Is There a Correlation Between the Number of Children and Medical Charges?**
  - **Purpose:** To explore whether individuals with more children incur higher medical charges, which could reflect family coverage costs.
7. **What is the Distribution of BMI Across Different Regions?**
  - **Purpose:** To analyze regional differences in BMI, potentially highlighting areas with higher obesity rates.
8. **How Does Age and Smoking Status Combined Affect Medical Charges?**
  - **Purpose:** To explore the combined effect of age and smoking status on medical charges, identifying high-risk groups for targeted interventions.

**NOTE: you are to group the age column (Age Group) using the below age distributions**

- Young Adults (18-30)
- Adults (31-45)
- Young Adults (46-60)
- Seniors (61 and above)