**Assignment BDA 25 – Auto**

***Information regarding the data -*The file contains ad airing data for 2021 for various Auto Brands. Each row represents one ad airing.  
  
ID – The ID for the advertisement creative**

**Network – The channel/network the ad aired on**

**Show – The show / programming during which the ad aired**

**Pod position – Position of the ad among multiple ads running in one ad break**

**Duration – Duration of ad in seconds**

**Spend – The spend on that ad airing – this is proportional to the number of viewers of that ad.**

**Auto**

Attached is the dataset of TV Ad Airings of some brands from the Insurance category. Use this data to answer the following-

* 1. What is the share of various brands in TV airings and how has it changed from Q1 to Q4 in 2021? Mention the top 3 brands by number of airings in each quarter too.
  2. Calculate the advertising spend efficiency (in terms of spend and number of airings) for each brand.
  3. Analyze the factors that might have contributed to the differences in efficiency. Consider variables such as network, show, daypart/month of airing.  
     - Provide insights and suggest potential improvements for the brand with the least efficient spend.
  4. Toyota wants to run a digital ad campaign to complement its existing TV ads in Q1 of 2022. Based on the data from 2021, suggest a media plan to the CMO of Progressive. Which audience should they target? \*Assume LG Ads has the ad viewership data and TV viewership for the people in the US.

P.S. Brownie points for any additional actionable insights you can draw from the dataset.