**Use Advertising Dataset and create a model that will predict whether customers will click on an ad or not.**

[**Dataset**](https://siescms-my.sharepoint.com/:x:/g/personal/shyamalae_sies_edu_in/EYWgpvvWUpRNrKLHnwQXfWgBYcQJ9qqv3i4DeUif015kPQ?e=THQa1j)

1. **Collection of Data**
   * + 1. Import Libraries - Import the required libraries
       2. Read the Data - Read in the advertising.csv file and set it to a data frame.
       3. Check the head of the dataframe.
       4. Use info() and describe() on the dataframe.
2. **Exploratory Data Analysis**
   * + 1. Let's use seaborn to explore the data.
       2. Create a histogram of the Age.
       3. Create a jointplot showing Area Income versus Age.
       4. Create a jointplot showing the kde distributions of Daily Time spent on site vs. Age.
       5. Finally, create a countplot with different hues defined by the 'Clicked on Ad' column feature.
3. **Data Cleaning**
   * + 1. Display the null counts for each column.
       2. Replace the nulls of “Area Income” by the mean of this column.
       3. Replace the nulls of “Male” by the mode of this column.
       4. Drop “Ad Topic Line”, “City”, “Country” and “Timestamp”
4. **Train and Test the data**
   * + 1. Split the data into training set and testing set.
       2. Train and fit a logistic regression model on the training set.
       3. Now predict values for the testing data.
5. **Accuracy Check**
   * + 1. Obtain Accuracy.
       2. Create Confusion Matrix.
       3. Create Classification Report for the model.