**EDA CASE STUDY**

**Problem Statement**

* Alice needs answers of questions about the data we have. How many men and women are there? It would be interesting to know how many of them have both a cell phone and a bank account. statistics on the population's age and geographic breakdown.
* We need to do an EDA on the data to get these kinds of insights so we can answer these kinds of questions, find inferences and insights in the information given, and make better decisions and predictions.

**Dataset Description:**

**country**: It represents the country name.  
**year**: It shows the specific year.  
**uniqueid** : Shows uniqueid for each row.  
**Has a Bank account**: It displays the Yes and No with the availability of a bank account facility.  
**Type of Location**: Shows the type of location which have Rural and Urban values.  
**Cell Phone Access**: It displays the access of cell phones.  
**household size**: It represents the size of the household or the number of members in each house.  
**Respondent Age**: This column represents the age od the respondent.  
**gender of respondent**: It shows the age of the respondent.  
**The relation with head**: This column shows the respondent's relationship with the head.  
**marital\_status**: It shows the marital status of the respondent.  
**level of education**: This column displays information about the education of the respondent,  
**Type of job** : It shows the type of job of the respondent.

* [**A Case Study on Exploratory Data Analysis**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_)
  + [**Importing Necessary Libraries**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_2_)
  + [**Loading Dataset**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_3_)
  + [**Dropping the Unnecessary columns.**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_3_1_)
  + [**Perform Exploratory Data Analysis**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_4_)
    - [**Find and handle the null values which are present in the dataset.**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_4_1_)
    - [**Handling the Null values.**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_4_2_)
    - [**Find the duplicate values from the dataset and handle them if any are present.**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_4_3_)
    - [**Dropping the Duplicate values.**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_4_4_)
    - [**Count the number of Unique values in each column in a given dataset.**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_4_5_)
    - [**Get the number of unique values for each column**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_4_6_)
    - [**Perform Gender-wise customer distribution using the count plot.**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_4_7_)
    - [**Get the count for unique values in the "gender\_of\_respondent" column variable.**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_4_8_)
    - [**Countplot**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_4_9_)
    - [**Perform Country-wise distribution using the count plot.**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_4_10_)
    - [**Perform analysis as per their marital status.**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_4_11_)
    - [**Do the analysis of Customer’s Education.**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_4_12_)
    - [**Find the Maximum Job category which customers are doing.**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_4_13_)
    - [**Find the various types of the Customer’s Relationship with head from the dataset.**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_4_14_)
    - [**Find the Age wise distribution of people using Plotting**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_4_15_)
    - [**Histogram**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_4_16_)
    - [**Find the distribution for the Type of location of people using a count plot.**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_4_17_)
    - [**Analyze the Cell phone access of people from the dataset.**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_4_18_)
    - [**Find the Bank account status of people.**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_4_19_)
    - [**Find the country and gender which are having the maximum number of people.**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_4_20_)
    - [**Analyze the Household size in the given dataset**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_4_21_)
    - [**Find the correlation between all the columns**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_4_22_)
    - [**Find the maximum type of location for each country. ( i.e. Urban, Rural).**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_4_23_)
    - [**Find out the following things for the column “Respondent Age”.**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_4_24_)
  + [**Conclusion**](http://localhost:8888/notebooks/OneDrive/Desktop/UPGRAD/ASSIGNMENT/pythonforDS/EDA%20-%20Case%20study/EDA_Case_Study_solution.ipynb#toc1_5_)