**DATA REPORT FOR ELECTRIC CAR-SHARING SERVICE COMPANY**

The electric car-sharing company needed a data scientist to process stations data to understand electric car usage over time.

1. **Business Understanding**

The business objective is to determine the most popular stations for car pick up and drop off within the city of Paris, which hours are the most popular for pick up and drop off, and which postal codes are the most popular for pick up and drop off.

1. **Data Understanding**

The electric car-sharing company provided a file with the necessary data to undertake this project. The information was sample data collected over the course of one month from different cities in France.

The file had information about the cities that the company operated in, the different times of day that cars were picked up and dropped off, the various stations that were used for pick up and drop off and the postal codes of these stations.

The data collected had some duplicated values and some columns were irrelevant to the research problems being undertaken.

1. **Data Preparation**

Using a colaboratory notebook, I uploaded the provided data file and loaded it into the notebook.

Columns that were not necessary for undertaking the research were removed from the dataset.

After dropping the irrelevant columns, I previewed the dataset, then proceeded to check for outliers in the given dataset.

I checked for missing values within the dataset and found that none were missing.

I then checked for any duplicates within the dataset and removed them, storing the new dataset without duplicates.

1. **Analysis**

The top 3 most popular hours for picking up cars in Paris were

1. 21H00
2. 16H00
3. 07H00

The top 3 most popular hours for returning cars in Paris were

1. 03H00
2. 12H00
3. 10H00

The top 3 most popular Stations for pick up in Paris were:

1. Porte de Montrouge
2. Voltaire
3. Courcelles

The top 3 most popular Postal Codes for pick up in Paris were:

1. 75015
2. 75016
3. 75017
4. **Recommendation**

With this information, the electric car-sharing company can improve their various Stations depending on the amount of traffic it has in a given day. The company can streamline their services so as to proportionately distribute staff within the given Stations and optimise the workers shifts based on the given peak hours for vehicle pick up and drop off.

The code used for this process can be accessed on git-hub, using the following link: https://github.com/Geoffrey-Chege/MORINGA-IP-W4-GEOFFREY-CHEGE-MWANGI.git