6.2 Exercises Real Life examples suitable for K-Means clustering

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ABSTRACT:

This exercise 6.2 aims to list the use-case of unsupervised learning algorithms like [K-Means Clustering](https://en.wikipedia.org/wiki/K-means_clustering) in real-life scenarios. It helps understand the data science concepts and enables Data science learners to use appropriate algorithms for required use cases.

Real Life examples for K-Means clustering

1. **INTRODUCTION**

Please find below scenarios and corresponding explanations on which K-Means algorithm is suitable to implement.

**Position 911 Emergency care unit near to Accident-prone Area along with State highway**.

* Problem Statement :

911 administration wants to place its emergency rescue unit near the required accident-prone area, which reduces the wait time of emergency services and covers a more significant portion of state highway using the same resources.

* Solution:

K-means Clustering will group the locations of maximum prone areas into clusters and define a cluster center for each collection, the places where the Emergency Units will open. These Clusters centers are the centroids of each group and are at a minimum distance from all the points of a particular cluster; henceforth, the Emergency Units will be a minimum distance from all the accident-prone areas within a cluster.

**Popping product ads to appropriate viewer groups in an entertainment app**.

* Problem Statement :

Product companies were spending too much on internet ads to maximize the impact of ads on sales; digital ads companies need to figure out some mechanism to broadcast the ads to the appropriate viewers' groups

* Solution:

K-means Clustering will group the viewers as per the provided attributes like location, age group, gender, likes, etc. Depending on these attributes, they are grouped in clusters and define a cluster center for each collection. Depending on cluster groups, the product ads were displayed to them.

**References**

Web references:

<https://towardsdatascience.com/k-means-in-real-life-clustering-workout-sessions-119946f9e8dd>