**Course code : CMPE-257 Sec 99, Group name : Insurgents\_Sales Prediction**

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The dataset contains product information for different supermarkets and their sales records. The business objective is to cluster the products into groups according to their visibility and sales so that supermarket can predict their future sales for specific products.

We followed below steps:

1. Data preparation

2. Applying clustering algorithms

3. Analyzing the results based on clusters

**Data preparation:**

1. Read and parse the dataset csv file using the pandas Dataframe.

2. Removed unnecessary columns and invalid/blank rows.

**Applying clustering algorithms:**

We applied elbow method and decided to group the data into five clusters. We applied following clustering algorithms using scikit.

1. K-Means

2. GMM

3. Agglomerative

4. DB\_Scan

5. Ward Hierarchical clustering

6. Mean shift

7. K-means with Tensor Flow

K-means Algorithm

Data Visualization