Customer Segmentation

Shaima Alharbi



Summary:

Customer segmentation is the practice of dividing customers into groups of individuals that are similar in specific ways relevant to marketing, such as age, gender, interests and spending habits.

The Customer segmentation helps the company to know the customers that's leads to success the business.

In this project I will apply the idea by classify the customers into four segmentations (A, B, C, D) based on Age, work exp, family size and more

In my opinion, there is multiple problem in the real-world can use the segmentation idea such as gamers segmentation, children segmentation.



Process:



- · Analytic the data
- Data cleaning.
- Visualization between features and Segmentation(target)
- Convert values into 0.1 - Convert categorical variable into dummy / indicator variables
- Derived Features. Add new feature (Age

Scale Data

Scale the numeric columns (Age, Family

Size. Work Experience)

Data Modlling

- · Split the data
- Baseline Model: predict the most common class.
- **Build Classifications** models:

(Logistic Regression, Decision Tree, Random Forest ,KNN ,SGD, Stacking)

Optimizing the Model

- compare models with the Baseline.
- The best model is Stacking model.
- Improve Stacking model by Grid Search CV

Result:

- The Baseline Model Accuracy score is 0.286068
- Build Classifications models: As it's shown in fig:1, I compared the models to the Baseline the best score is Stacked model by 0.521751.
- At the end, I achieve the best score 0.528882 by optimizing the Stacking model by using GridSearch CV

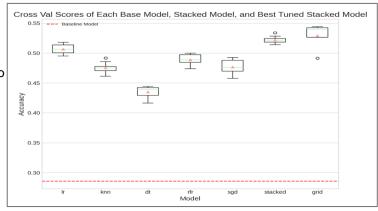


Fig:1

Project links:

Github:



LinkedIn:



Tech used:

