

Analysis of Mall Customers Data

The data is about customers making purchases in a mall. Properties of customers such as Gender, Age, Annual Income and Spending score are included in the data.

The data consists of 6 columns with 200 observations. After dropping some unnecessary columns an overview of data is given below:

	Gender	Age	Income	SpendingScore	segments
0	Male	19	15	39	3
1	Male	21	15	81	2
2	Female	20	16	6	3
3	Female	23	16	77	2
4	Female	31	17	40	3

Starting with the Gender of customers, after observation it was found that females does shopping more than males. Figure 1 given below support the finding.

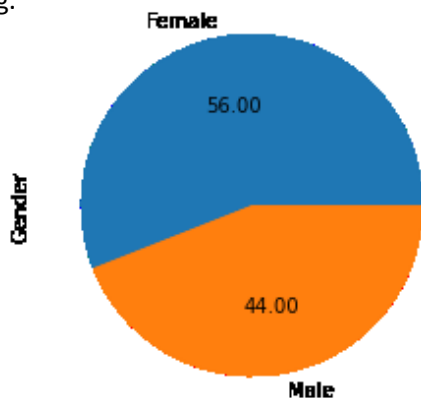


Fig. 1

Moreover Females shows tendency to spend more than Male customers. Spending scores of Females are high compared to males.

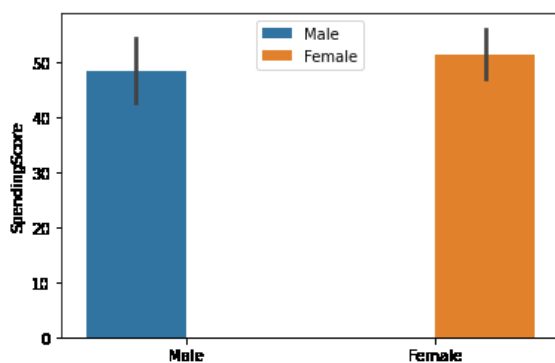


Fig. 2

However more than gender differentiation in spending, more relevant is to differentiate it with the Annual Income and Age. Moreover by this method, will be able to know the characteristic or spending nature of a particular person or a group as such.

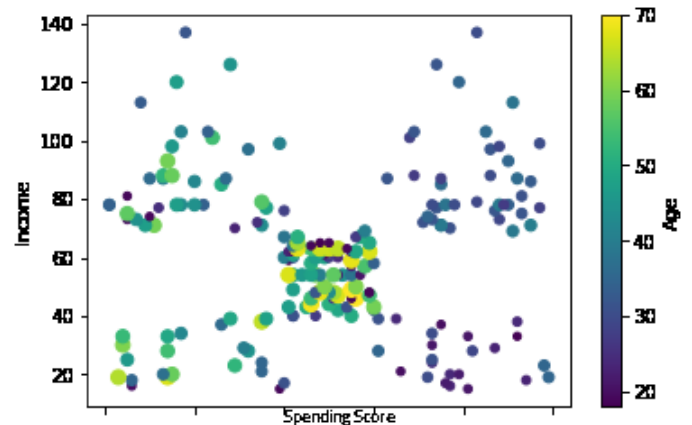


Fig. 3

In Figure 3, by plotting income and spending score, it is visible that people with varying annual income has difference in spending score. 5 segments is visible while plotting the scatter plot. Furthermore to understand the age of customers, colormap is used. Moreover it reveals the spending nature of different aged people with varying annual income respectively. Through deep observation we can term 5 segments as 5 type of customers. Sensible, Careless, Standard, Target and Careful.

Sensible Customers: The cluster of points in the bottom left corner. They have only limited income and they spend less too. Age is also a matter for decrease in the annual income.

Careless Customers: The cluster of points at the bottom right corner. They have very limited income but spending score is very high.

Standard Customers: The cluster of points at the centre of the plot. They have average amount of income and their spending score is also average. By checking the customers age it is evident that most of the highly aged people comes under this cluster.

Target Customers: The cluster of points at the right top corner of the plot. The customers having high

annual income and have a nature of spending much. So obviously they are the targeted customers.

Careful Customers: The cluster of points at the left top corner of the plot. They are called the careful ones because even they have high income but they tend to spend very less and maybe more into savings.

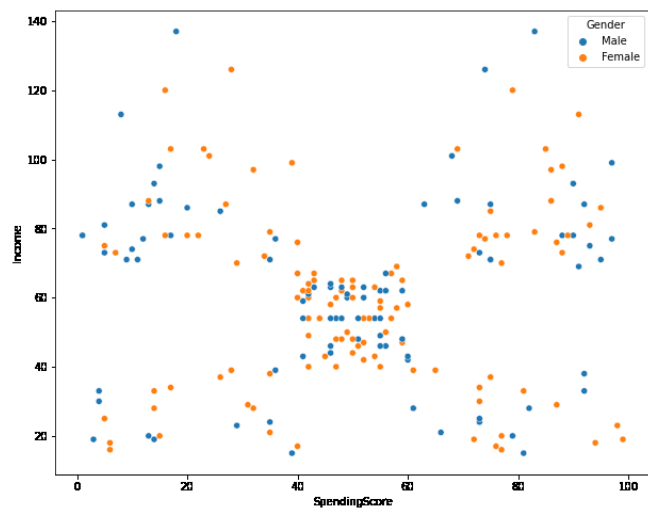


Fig. 4

Now it's clear that which type of customers have to be targeted by the mall shops. From figure 2 we were able to find that Females spend more. But it doesn't mean that we can only target Female customers, from figure 4 it is evident that both Genders have almost same number of customers in the targeted cluster.