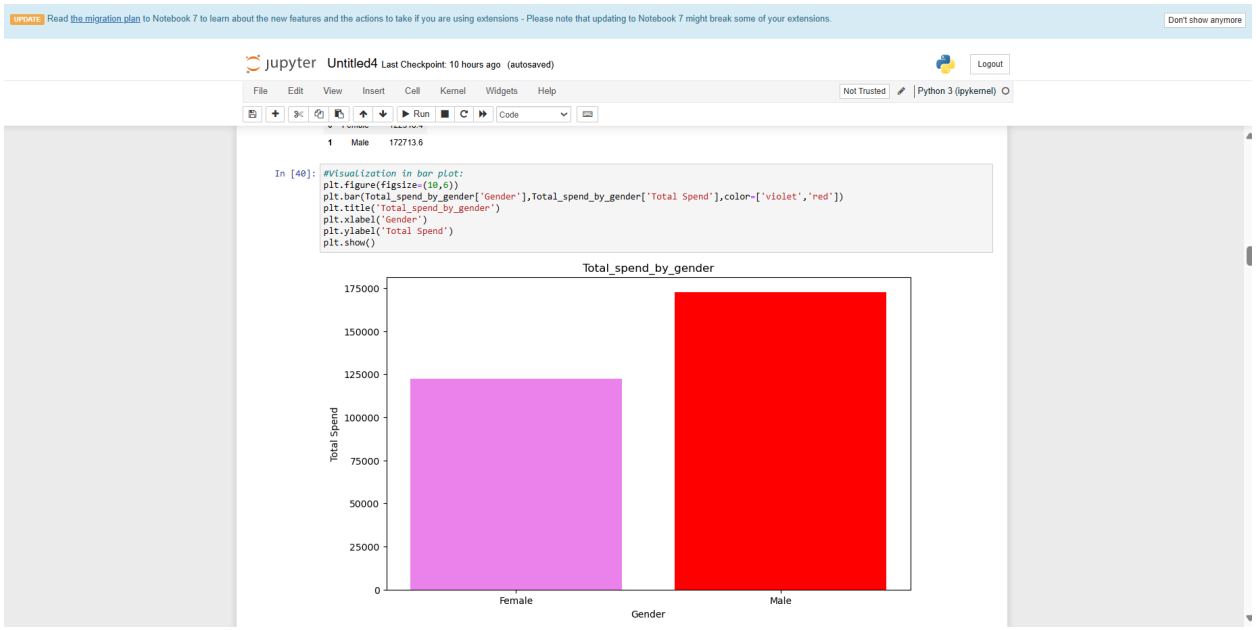
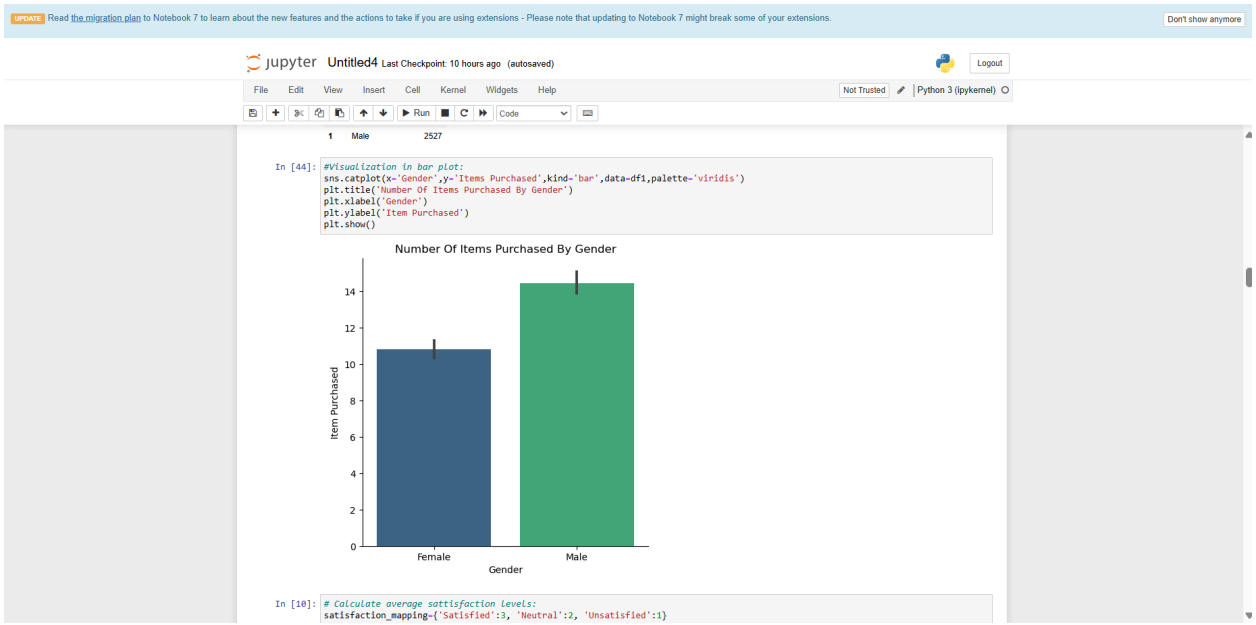
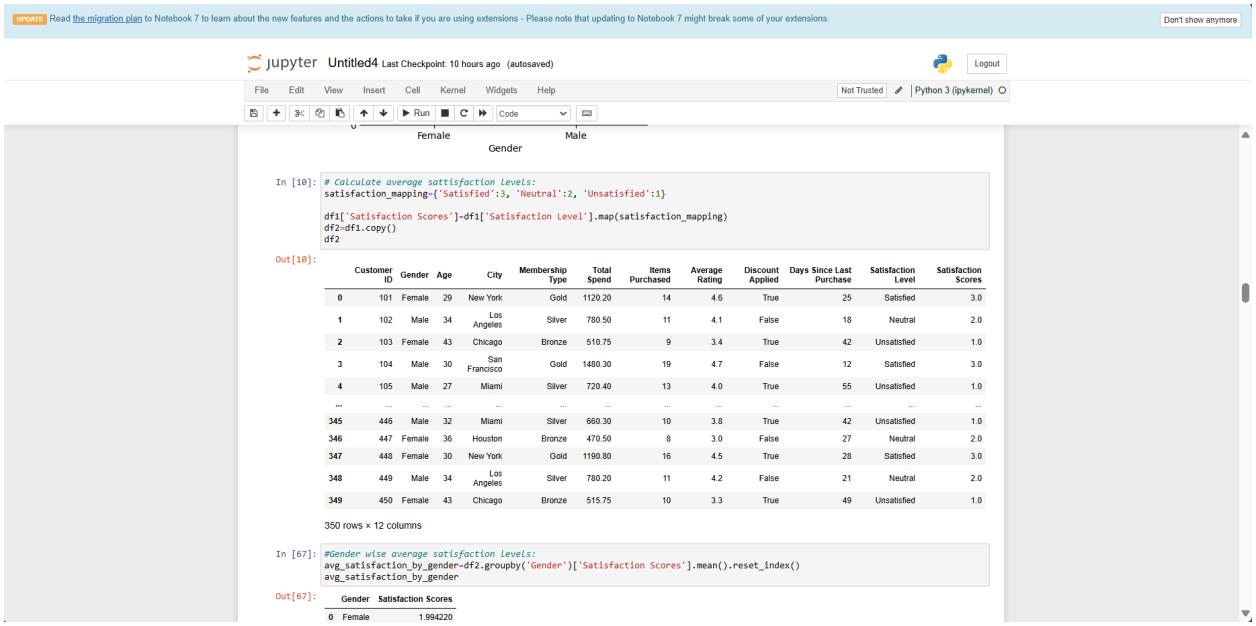
Visualization and Findings (Retention strategies):



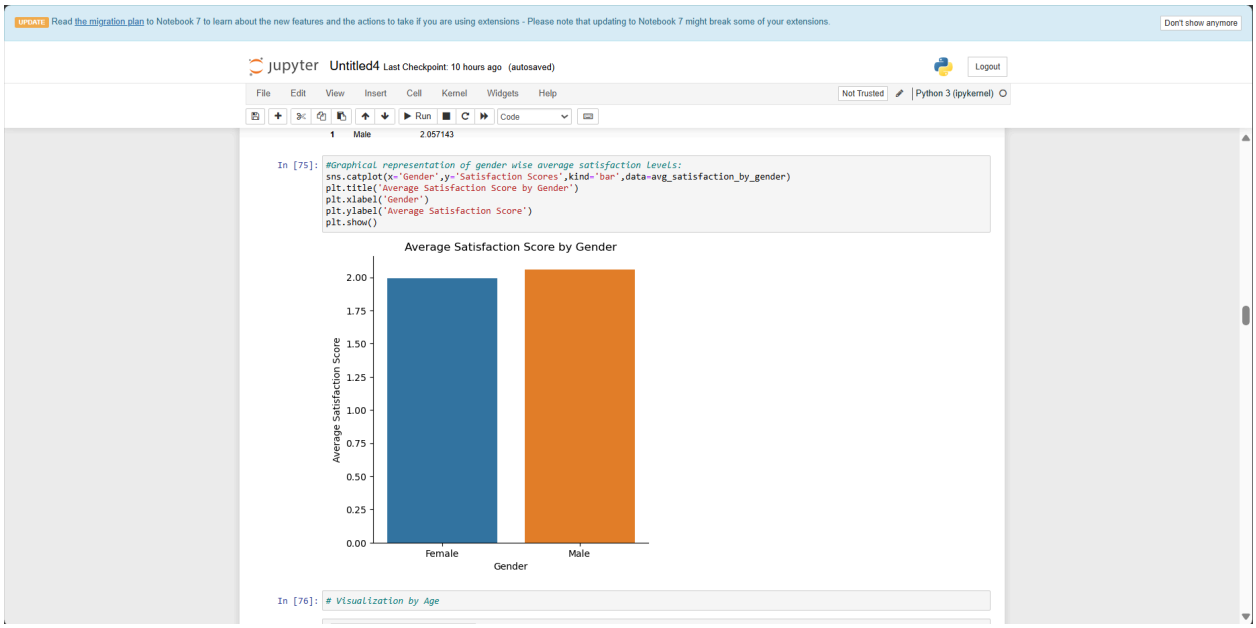
From the graph, it appears that total spend by male is more than total spend by female. By offering special discount for female, we can significantly boost the spending capacity for female.



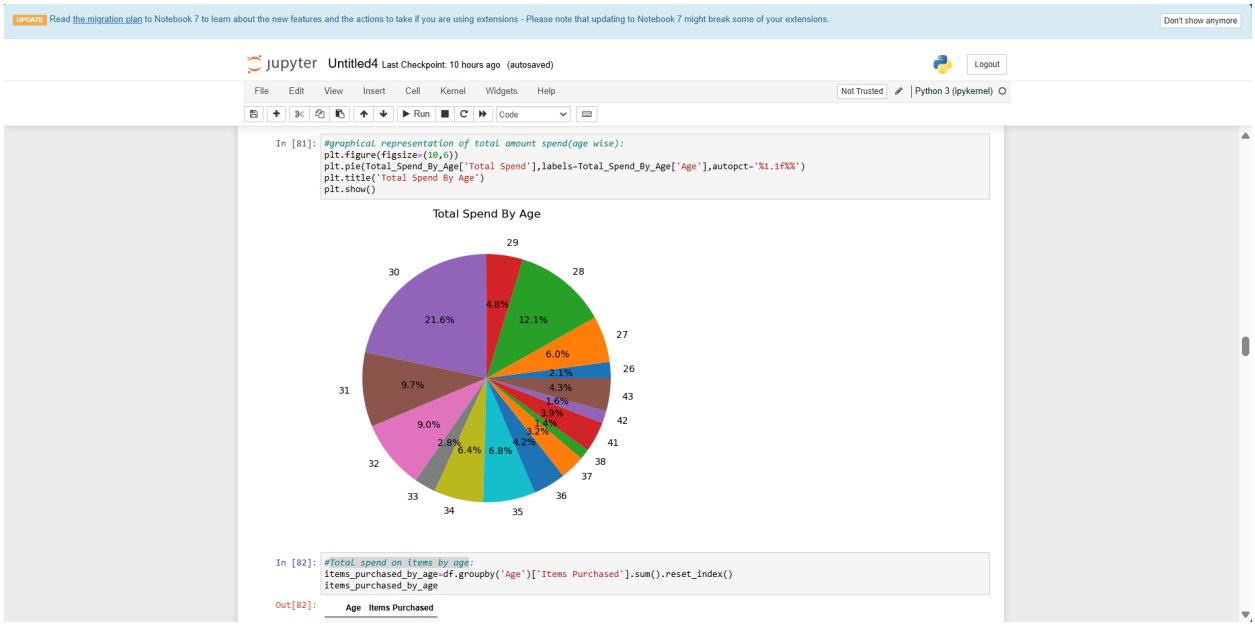
From the graph, it appears that gender wise spend on items in case of male is greater than that of female. By offering special discount on specific items, we can balance the graph.



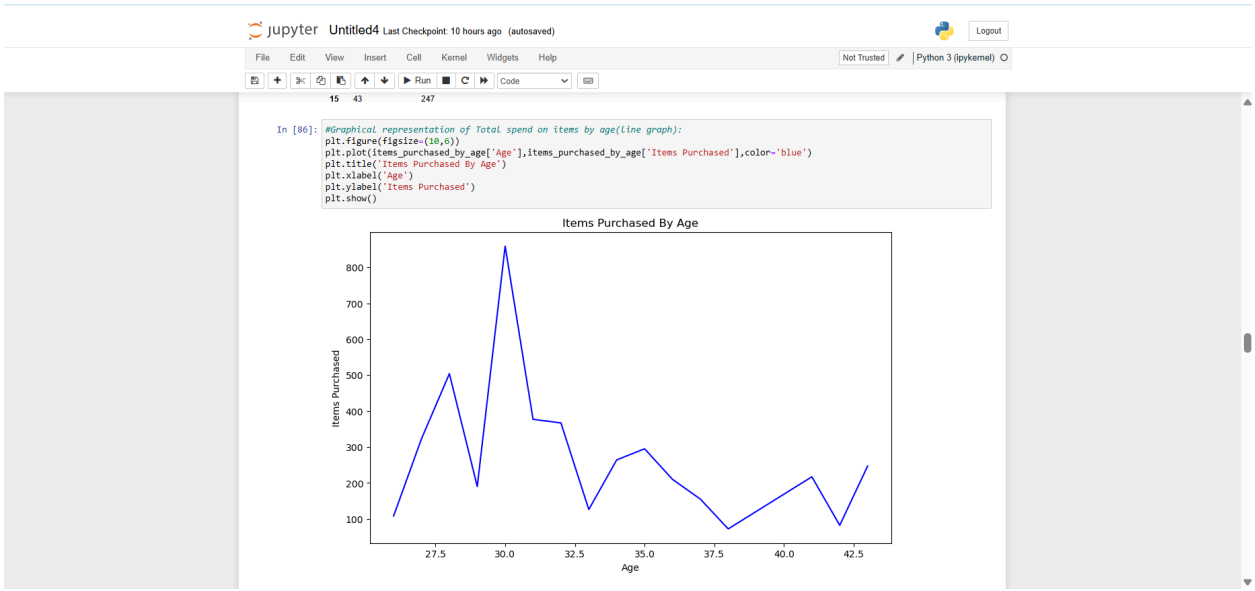
We need to convert object type data into numerical data in order to calculate average satisfaction levels for all categories.



Above graph shows average satisfaction score by gender. It is near about similar in both cases. Hence, no significant change in the strategy is needed.



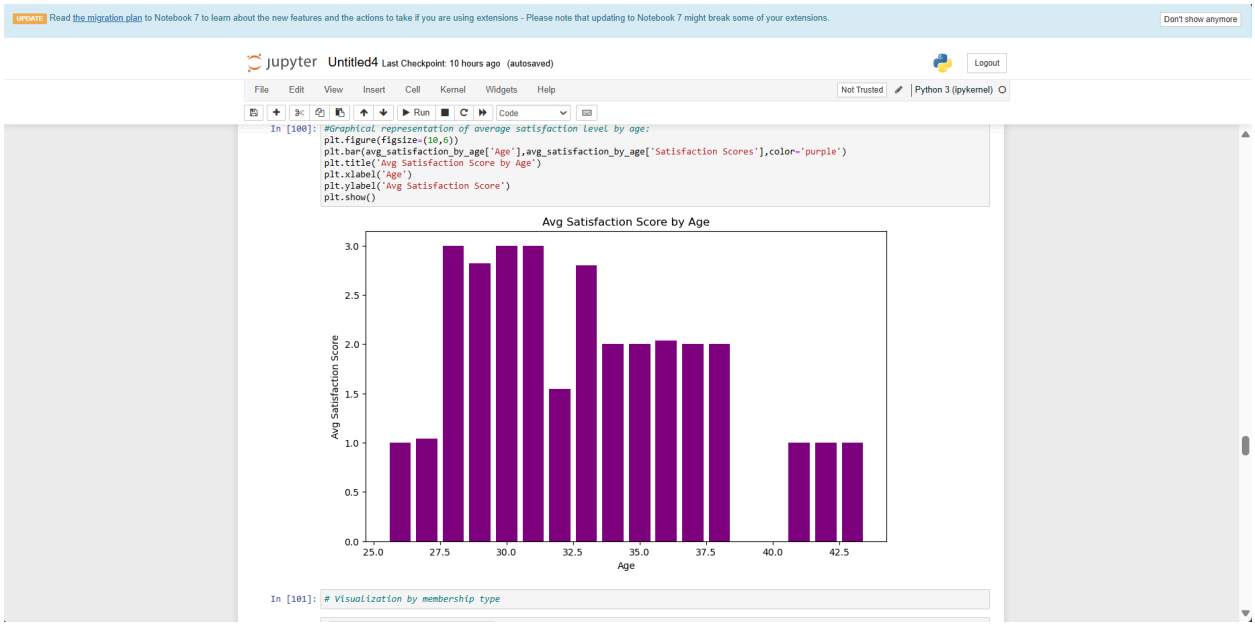
The above pie charts shows age wise spending of the customers which is highest at the age 30. It could mean that most people get married at age 30, which encourages them to spend more. Lower the age, lower the spending. As the age goes beyond 30, the total spending decreases. Hence, for the higher age category, we can offer more discounts as they have more purchasing power but lower interest in spending.



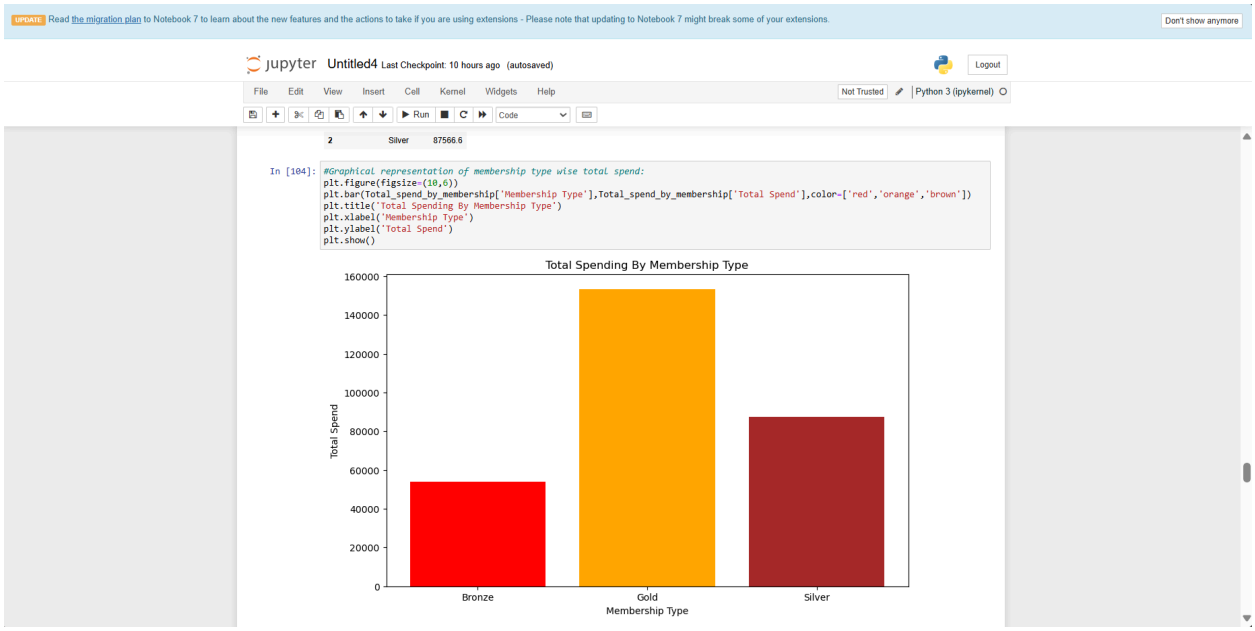
The above line graph shows age wise spending on the items by customers which is highest at the age 30. It could mean that most people get married at age 30, which encourages them to spend more. Lower the age, lower the spending. As the age goes beyond 30, the total spending decreases. Hence, for the higher age category, we can offer more discounts as they have more purchasing power but lower interest in spending.

The above graph shows membership type distribution by age. The gold type membership has the peak at 30 whereas it is lowest at the ages 29,32. More discount should be given for these age groups in order to get more gold type memberships in these age groups. The silver membership is least in case of age 29. These customers showing more interest in gold type membership. Hence, more discount should be given for gold type membership in this age group to encourage god type membership, the customers in silver bracket may get converted into gold, hence will boost overall revenue. The silver type membership is least in case of ages 26 and 33. More discount should be given in these age groups to encourage more silver type membership. The bronze membership is the lowest in the age group 35. Hence, more discount should be given for silver type membership in this age group so that the bronze bracket will get converted into silver, thereby increasing overall revenue.

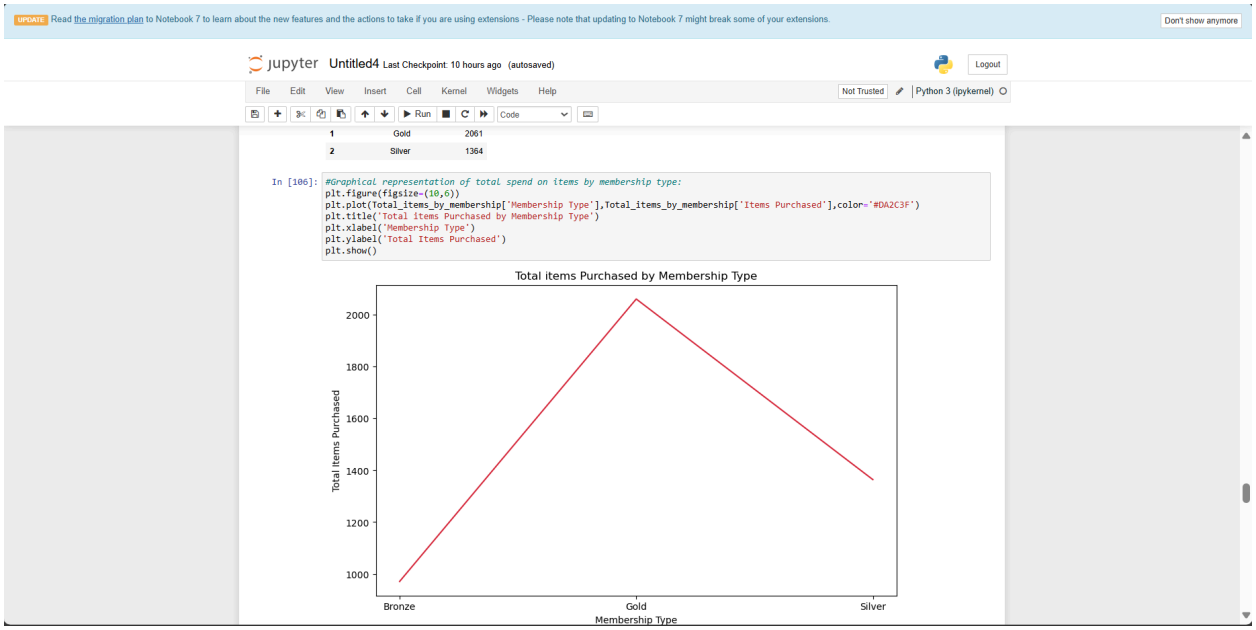
The bronze type membership is lower in the age groups 38 and 42. More discount should be given in these age brackets in order to promote bronze membership.



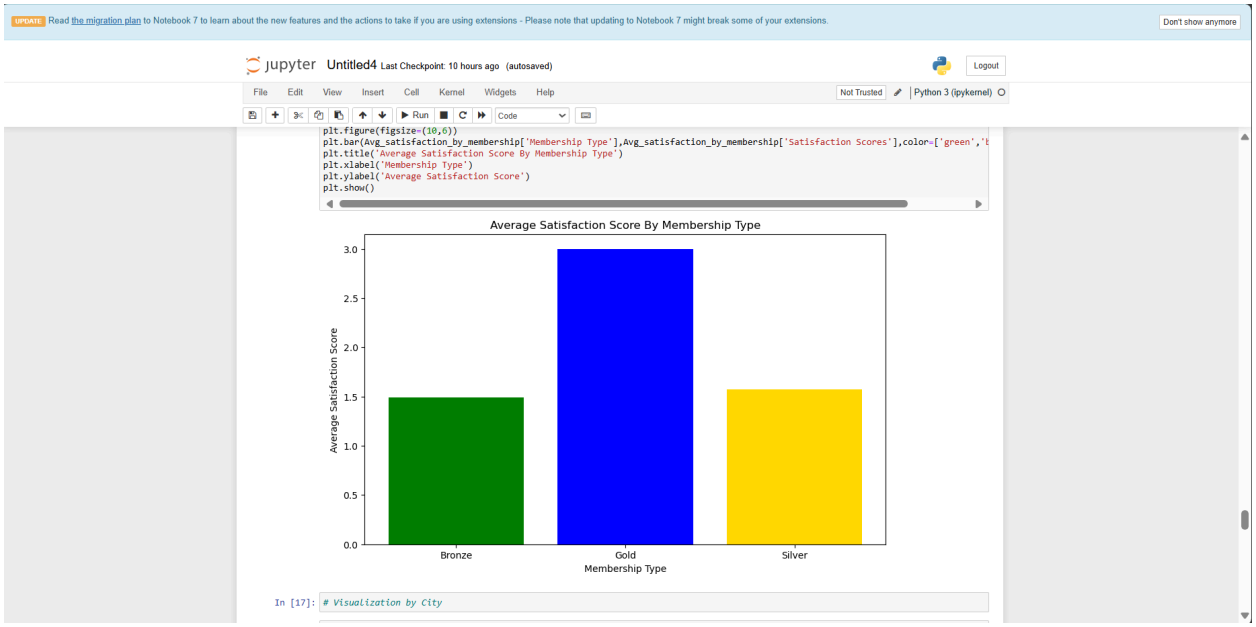
From the above graph, we can see that the age 30,31,28 group people are most satisfied. The average satisfaction level is least in case of age group 26. More emphasize should be given on these customers, similarly more emphasize should be given for the age groups 41,42,43 to improve overall average satisfaction level.



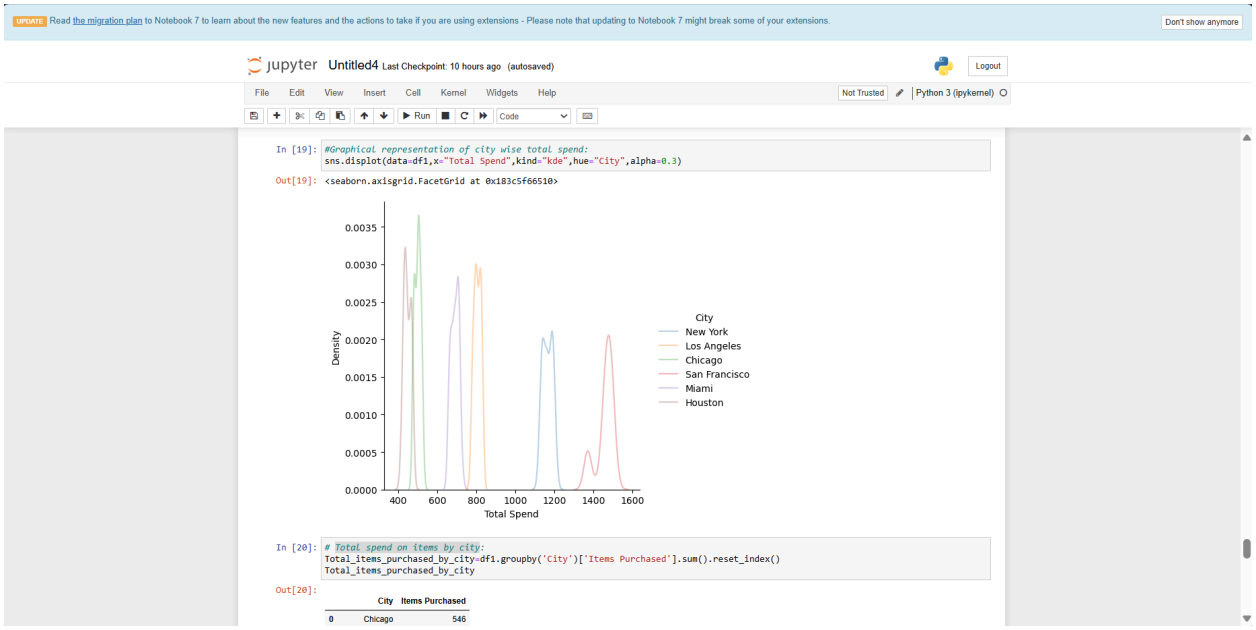
The above bar graph shows membership type wise total spend which is highest in case of gold, followed by solver and bronze. More discount should be given on bronze type membership in order to boost the bronze membership and retain its customers. For silver type membership, we can follow the same strategy.



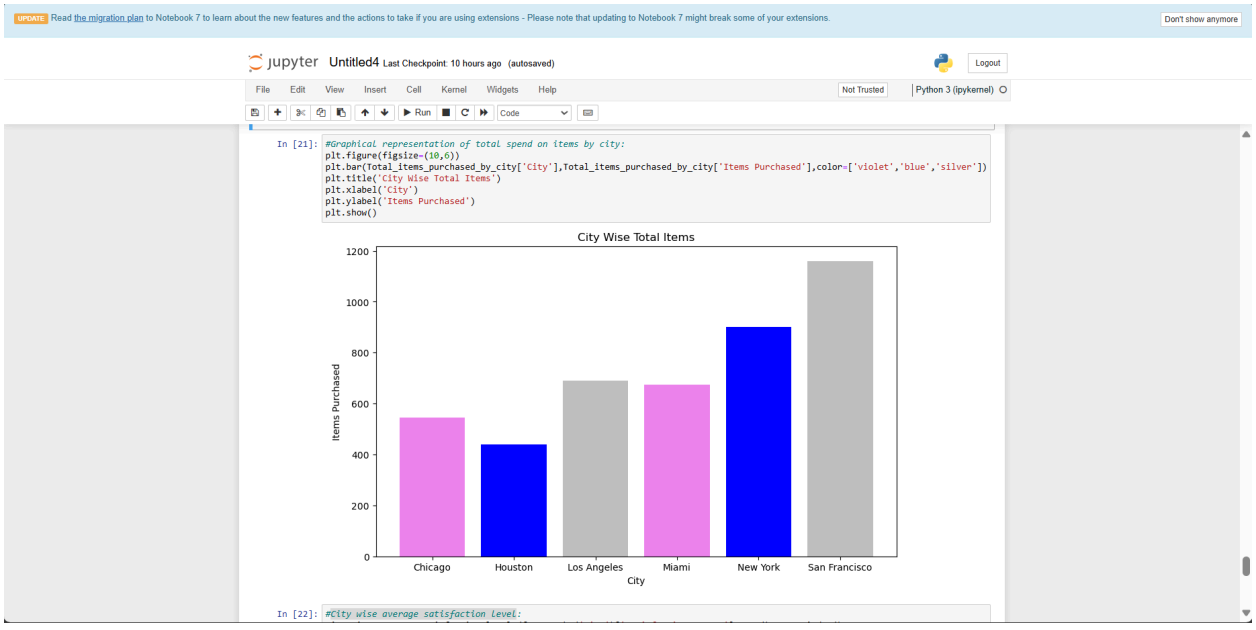
The above graph shows total spend on items by membership. It is lower in case of silver and lowest in case of bronze. More discount should be given for the customers in these categories in order to boost total spending on items.



The above graph shows that the average satisfaction level is highest in case of gold type membership and it is nearly equal in case of silver and bronze type memberships. The services in these categories (silver, bronze) should be optimized such as faster delivery time, more discount, customize catalog, etc so that they could par with gold.

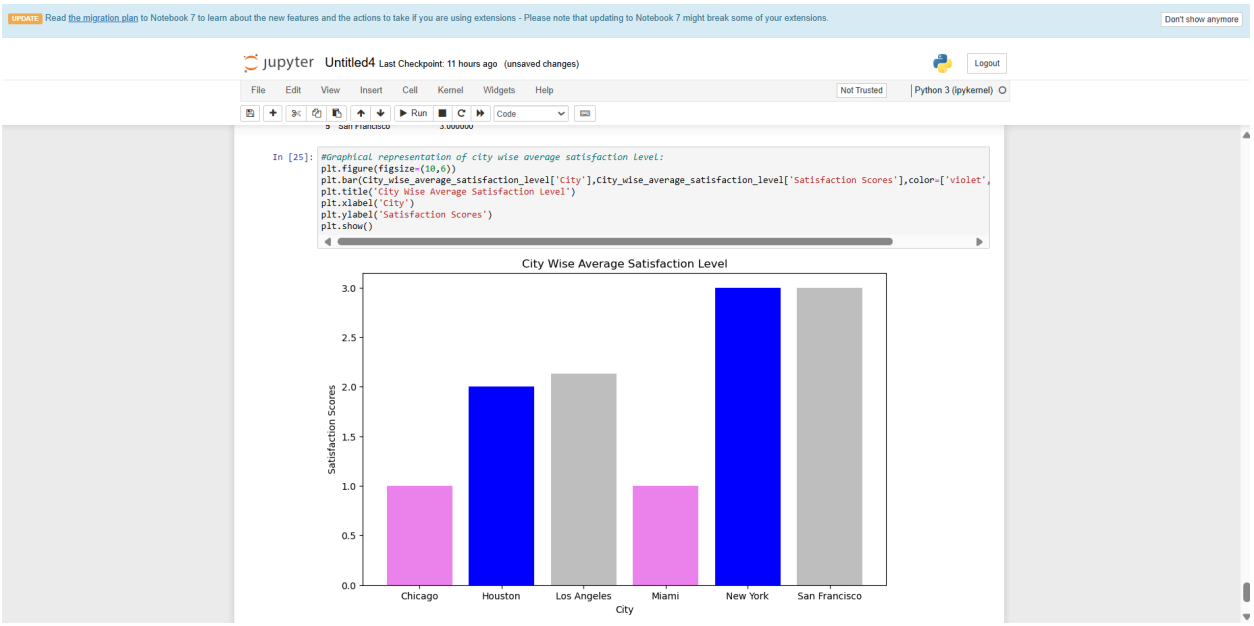


The above plot shows geography wise total spend. For the lower population density, the spending is higher. Ex. San Francisco with lower population density (0.0020) has high spending(1500). And Chicago with population density (0.0037) and spending (500). Hence, we can draw the conclusion that for higher population density we need to offer more discount in order to increase their total spend.

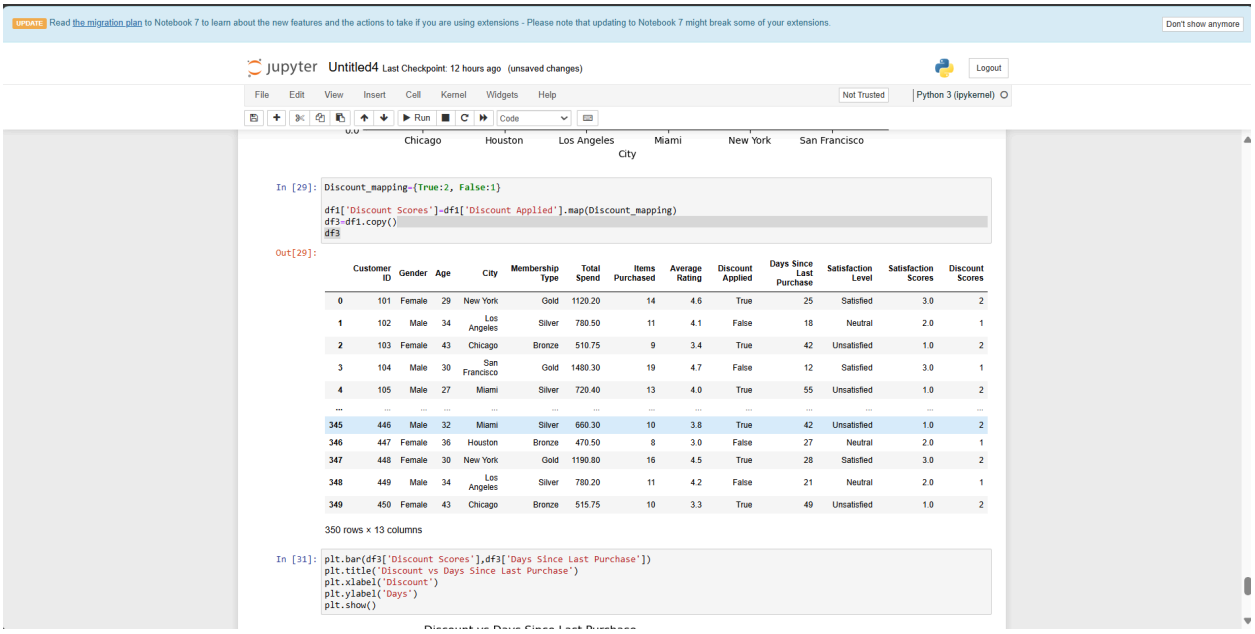


The above graph shows total spend on items (city wise). It is highest in case of San Francisco and lowest in case of Houston. Hence, we can draw the conclusion that we need to offer more

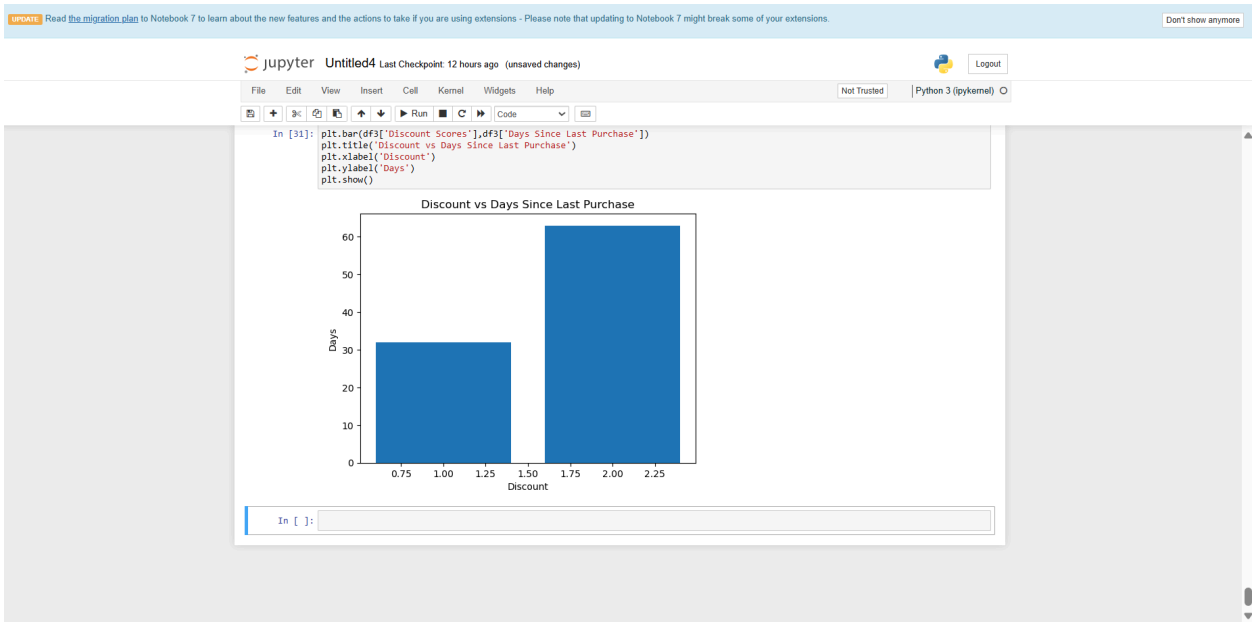
discount for the customers from Houston, Chicago, Los Angeles and Miami in order to improve their satisfaction level, spendings. This will help us to retain customers from these countries.



The above graph shows city wise average satisfaction level which is highest in case of New York and San Francisco and lowest in case of Miami and Chicago. Hence more emphasize should be given on these countries in order to improve overall average satisfaction level.



Further we have converted the object type data in discount applied table to int data type.



From the above graph we can observe that if the discount is given to the customers, there is less gap between and when no discount is given, it shows more gap since the last transaction. Hence, more discount and loyalty benefit should be promoted in order to retain the customers so that they can do transaction regularly.

Personalized retention tactics:

More loyalty benefit discount should be given to the existing customers, and for the new customers, we can offer discount on the first transaction and reward points so that when the customer will visit again, he/she can utilize those reward points to avail benefits like faster delivery, etc.