

Summative Assessment #1:

Ad Hoc Analysis

Required:

1. Count of Each Item Sold Per Month

Product	Quantity					
	Month	2022-01	2022-02	2022-03	2022-04	2022-05
	2022-06					
Candy City   Gummy Worms		9559	9996	9986	10043	9801
Candy City   Orange Beans		9774	10037	9611	9914	9964
Exotic Extras   Beef Chicharon		9665	10001	9816	9890	10028
Exotic Extras   Kimchi and Seaweed		9676	9949	9967	9921	9773
HealthyKid 3+   Gummy Vitamins		9681	9980	10145	9842	9948
HealthyKid 3+   Nutritional Milk		9727	9691	9876	9786	9881
HealthyKid 3+   Yummy Vegetables		9959	10256	9896	9861	9735

**Short Description:** This table is the summary of how many products of each kind were sold for a certain month. The quantity of the products sold in the table easily go over nine thousand and can even hit up to more than ten thousand.

2. Total Sale Value Per Item Per Month

Product	Sales Value					
	Month	2022-01	2022-02	2022-03	2022-04	2022-05
	2022-06					
Candy City   Gummy Worms		1433850	1499400	1497900	1506450	1470150
Candy City   Orange Beans		1945026	1997363	1912589	1972886	1982836
Exotic Extras   Beef Chicharon		12554835	12991299	12750984	12847110	13026372
Exotic Extras   Kimchi and Seaweed		7731124	7949251	7963633	7926879	7808627
HealthyKid 3+   Gummy Vitamins		14521500	14970000	15217500	14763000	14922000
HealthyKid 3+   Nutritional Milk		19356730	19285090	19653240	19474140	19663190
HealthyKid 3+   Yummy Vegetables		4979500	5128000	4948000	4930500	4867500

**Short Description:** This table is the summary of how much sales were generated depending on the product and the month. The total sales of the products sold in the table are worth, at least, millions.

3. Repeaters/Inactive/Engaged Customer Activity

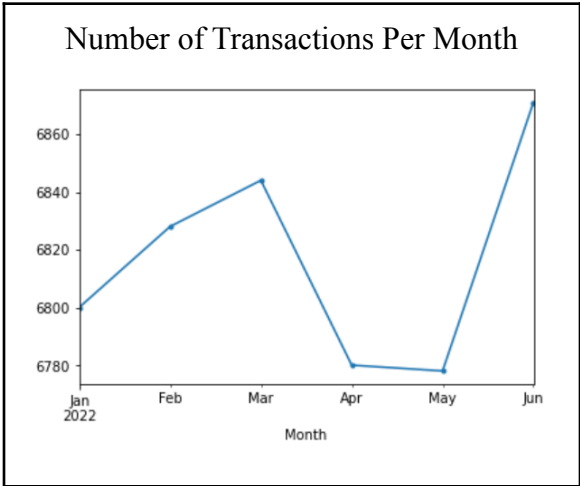
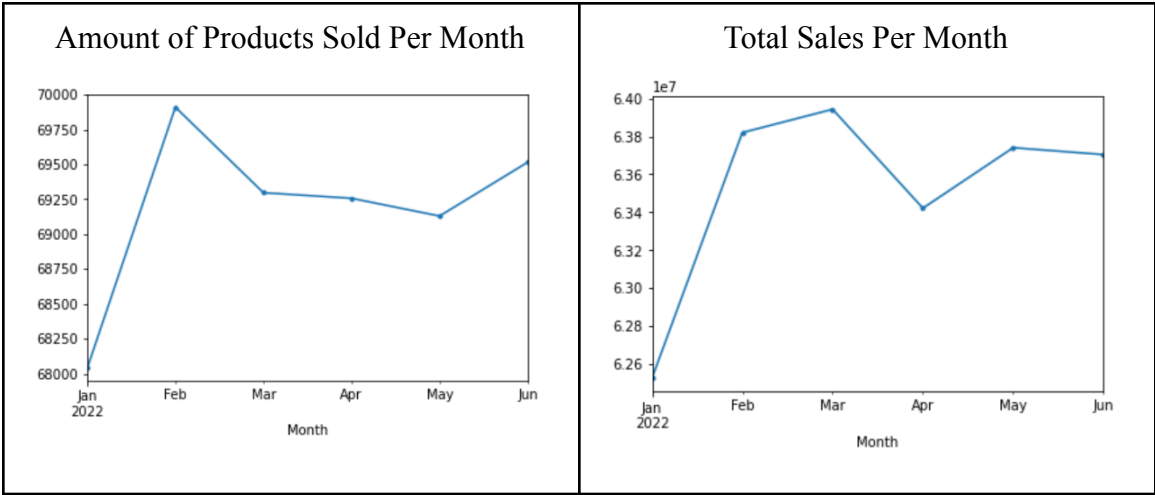
	Month	2022-01	2022-02	2022-03	2022-04	2022-05	2022-06
Repeaters		0	5275	5331	5296	5237	5320
Inactive		0	1525	1991	2055	2057	1964
Engaged		0	5275	4169	3304	2655	2159

**Short Description:** This table is the summary of how many customers 1) had purchases in the previous and next month (i.e., the repeaters), 2) has purchase history but has not purchased anything in the next month (i.e., the inactive), and 3) have consistently purchased products every month (i.e., the engaged).

Additional Charts/Graphs:

In addition to the required tables, additional charts or graphs are provided for easier visualization and comparison of data. Please note that the 1e7 and 1e8 mean that the y-axis value should be multiplied by 10,000,000 and 100,000,000, respectively (which is also the same as  $10^7$  and  $10^8$ , respectively).

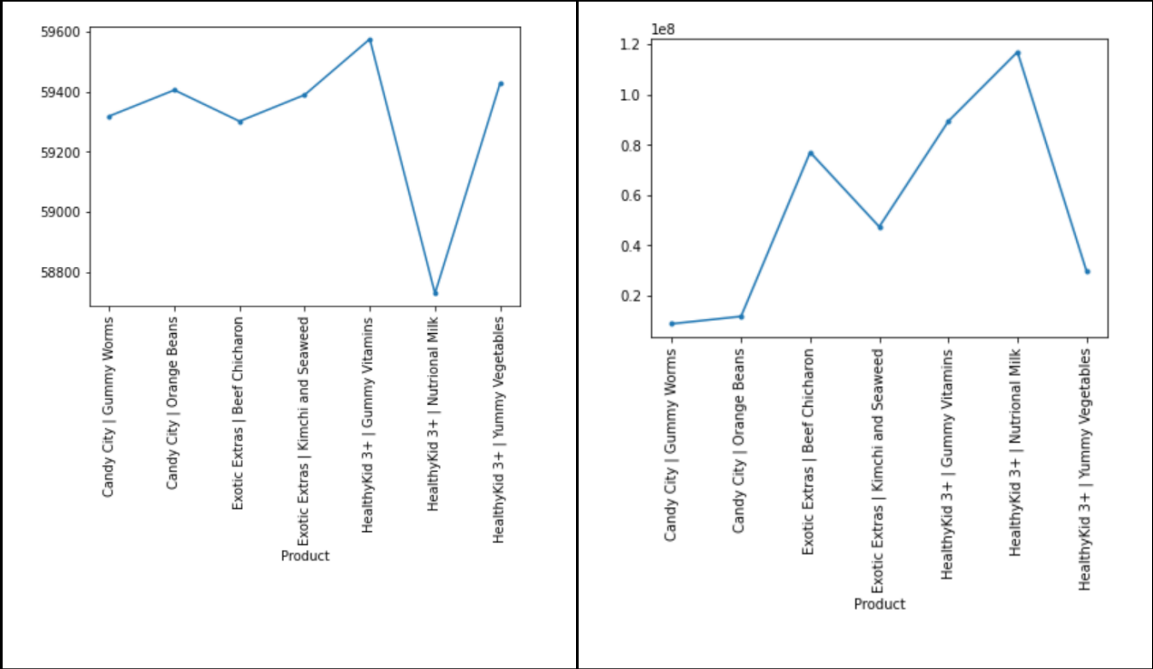
- **Comparing Amount of Products Sold Per Month, Total Sales Per Month, and Number of Transactions Per Month**



**Insight:** Despite having sold the most products in February, the total sales value in March are the highest; additionally, despite having the most number of transactions in June, the amount of products sold and total sales value in June are not the highest. These charts show that a high number of transactions is not equal to a high amount of products sold, and that neither of these are equal to a high amount of sales. This may be due to the fact that factors such as price per item and customer’s spending habits have an effect on how much sales will be when it is totaled, how much of each product a customer buys, and etc.

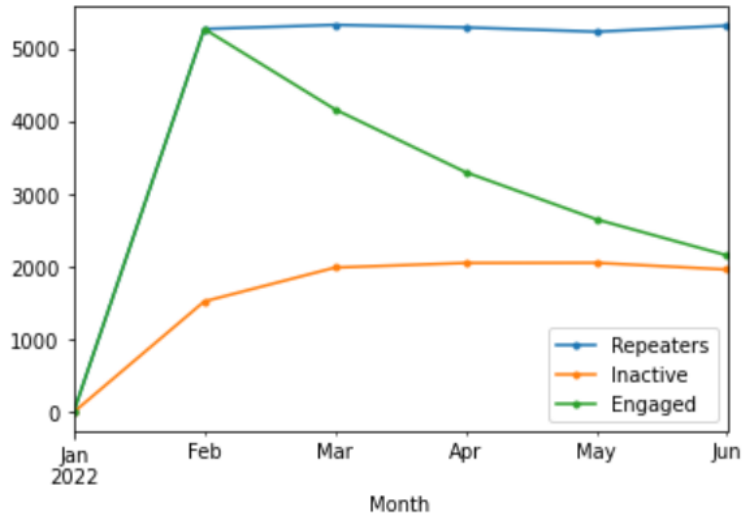
- **Comparing Amount of Products Sold Per Item and Total Sales Per Item**

Amount of Products Sold Per Item	Total Sales Per Item
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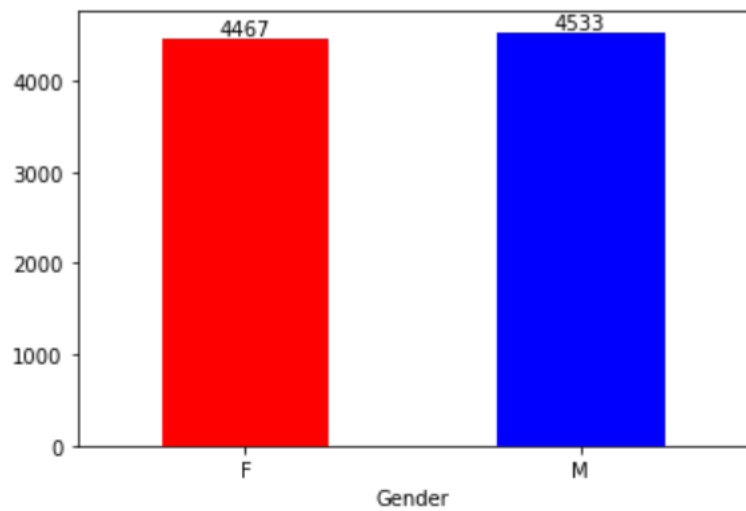
**Insight:** Much like the previous analysis, a large amount of products sold per item does not always result in a higher sales value per item. In this case, the price per item is the deciding factor for whether the highest number of products sold per item will also result in the highest sales value per item.

● Customer Activity Per Month



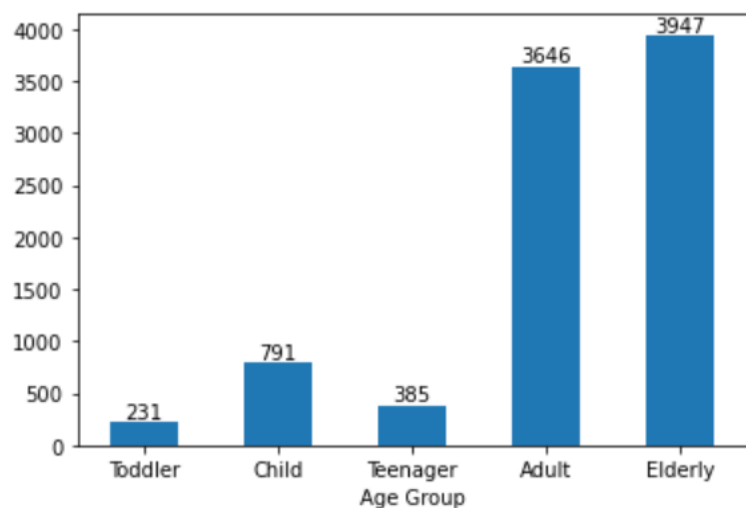
**Insight:** This graph is a visual chart version of the **Repeaters/Inactive/Engaged Customer Activity**, and helps in understanding the differences between each month's customer activity. Given that there is no collected data prior to January, there will be no basis for knowing whether a customer falls under repeater, inactive, or engaged; hence, the month of January starts with a zero. The graph shows that there is a near steady or fairly equal number of customers who are either repeaters or inactive; on the other hand, customers who are categorized as engaged are steadily declining as the months pass.

● Total Number of Male and Female Customers



**Insight:** This bar graph shows the amount of male and female customers who purchased something within the 6 months worth of collected data; the graph also clearly shows that there is a near equal amount of male and female customers. This could mean that Lola Tamis’ products cater to both genders, rather than just either one gender; in retrospect, the possibility of a customer sharing a false gender should also be considered.

- **Number of Customers Within Each Age Group**



**Insight:** This bar graph shows the number of customers that fall within a certain age group. The criteria for each age group are as follows: Toddler: 0 to 2 years old, Child: 3 to 12 years old, Teenager: 13 to 17 years old, Adult: 18 to 65 years old, and Elderly: 65 years old and above. The graph shows that the customers are mostly adults and elderly people; though, the possibility of a customer sharing a false birth date should also not be discredited.