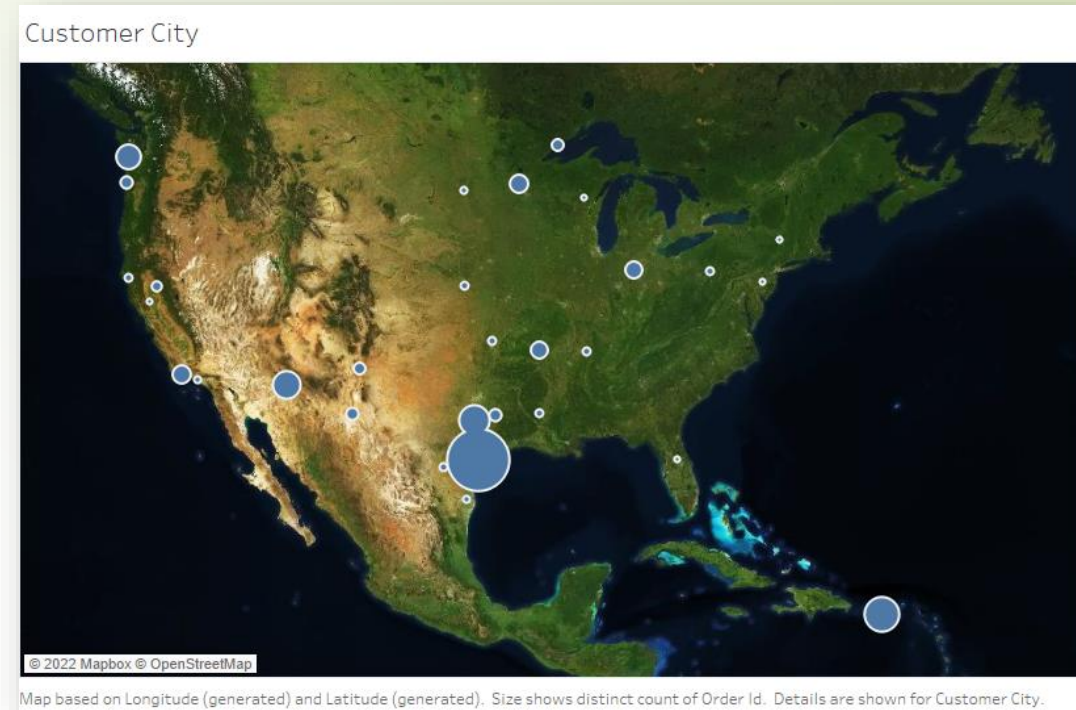# *Market and Retail Visualization*

- Saksham Kumar

File created on: 4/2/2022 6:25:23 PM

Problem Statement

➢ OList is an e-commerce company. They have a wide variety of products. But for some time now they are facing heavy losses.

➢ So they want to reduce unnecessary costs. For example, some products sell very high while some have very little. And the low sales lead to higher warehouse costs for these products.
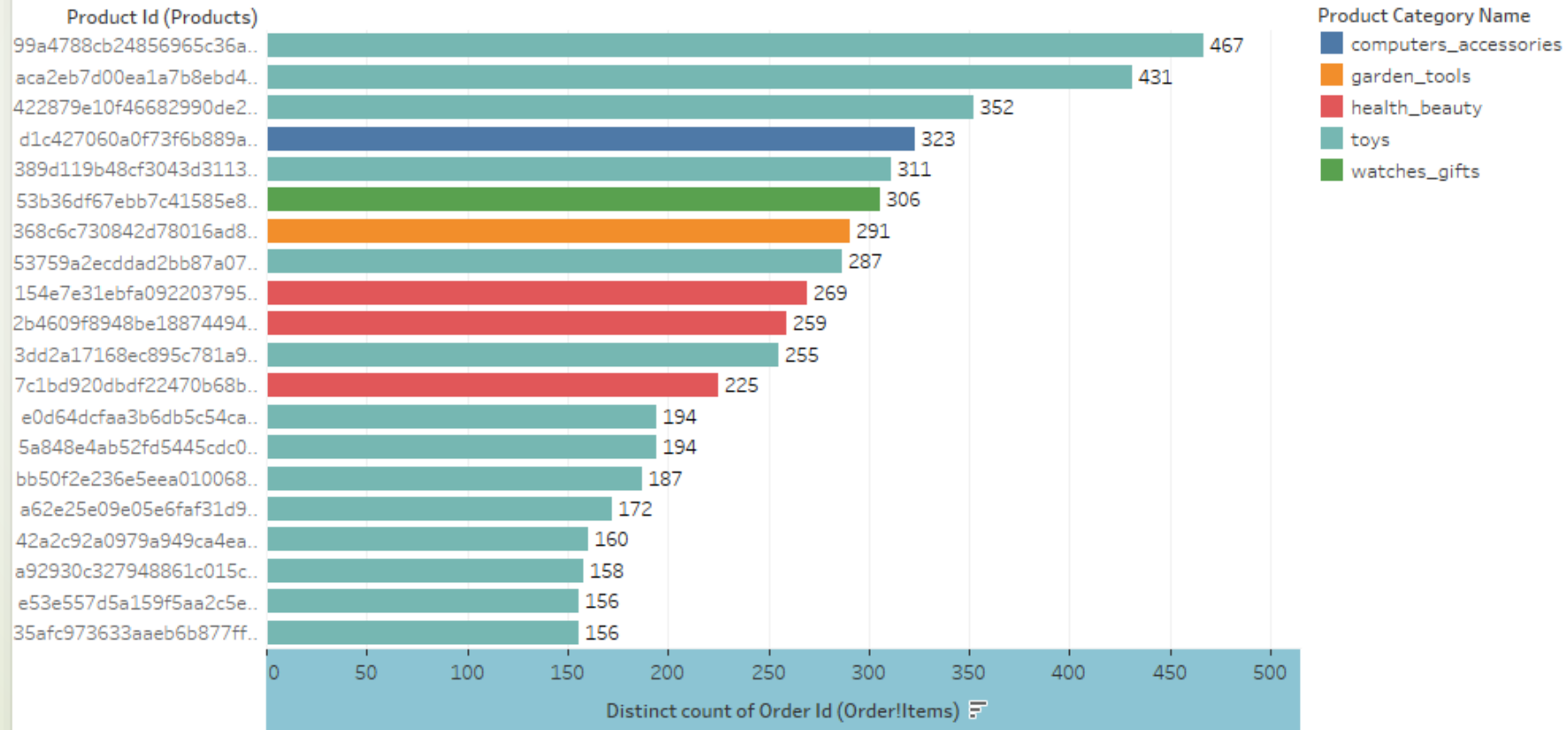

Customer City

Map based on Longitude (generated) and Latitude (generated). Size shows distinct count of Order Id. Details are shown for Customer City.

© 2022 Mapbox © OpenStreetMap

➢ We have to identify which products sell more. Also, we have to understand the buying behavior of the customer using market basket analysis and analyze which product category is more likely to buy along with other products.

➢ For this Capstone, we have to consider only delivered orders

Top 20 Ordered Products

➢ Mostly are **toys**, and then **beauty** products

➢ The highest ordered product is from the **Toys** category and has been ordered **467** times.
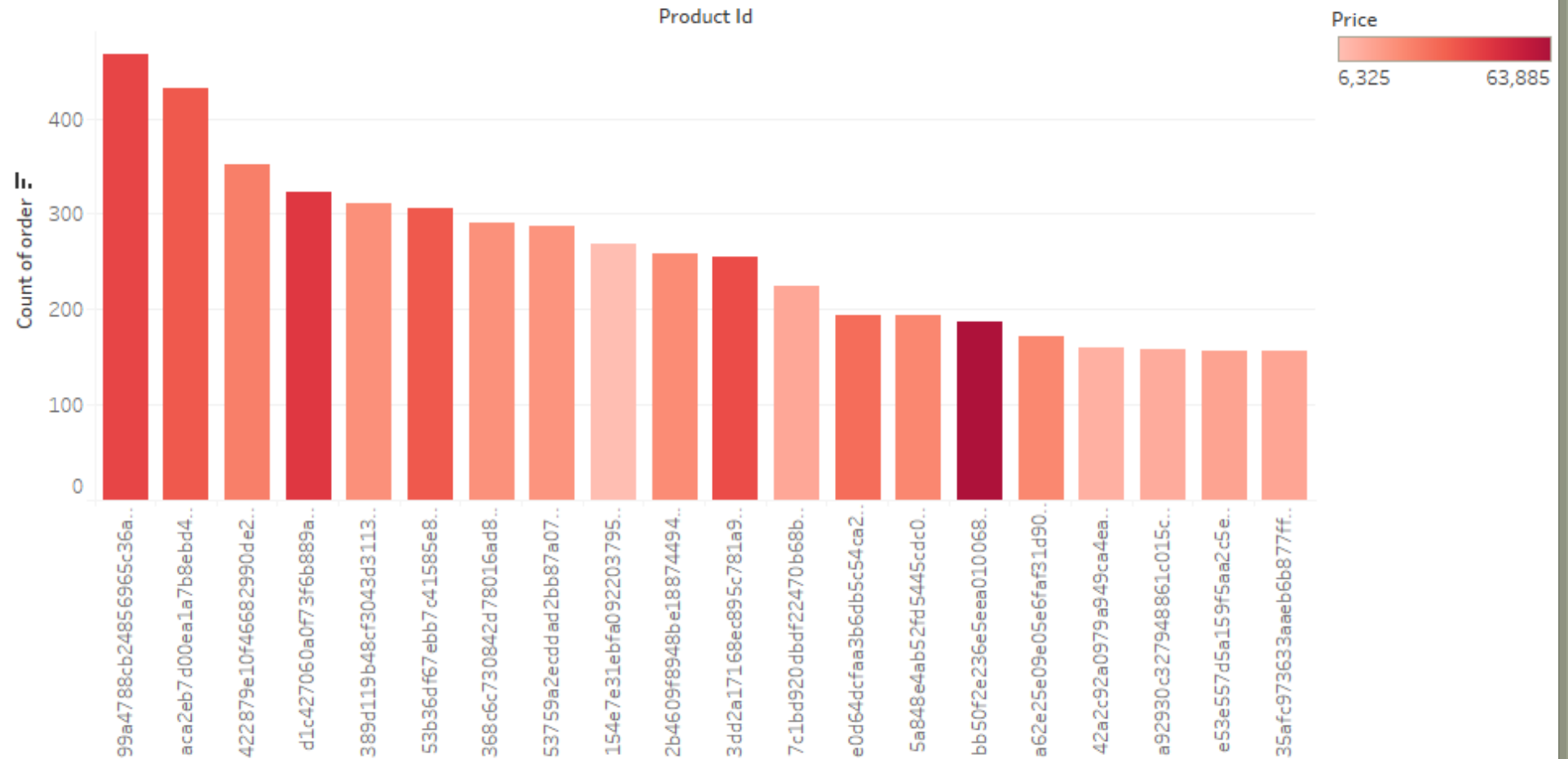
Top ordered Products with Price

Top Ordered Product Categories

➤ Highest ordered product category is **Toys**

➤ **Toys** ordered **74,608 times**

Top Ordered Product Category

Product Category Name	Total orders	% of total order
toys	74,604	75.61%
health_beauty	2,868	2.91%
bed_bath_table	2,343	2.37%
sports_leisure	2,085	2.11%
computers_accessories	1,937	1.96%
furniture_decor	1,753	1.78%
watches_gifts	1,490	1.51%
housewares	1,477	1.50%
telephony	1,097	1.11%
auto	1,015	1.03%
cool_stuff	953	0.97%
garden_tools	836	0.85%
perfumery	770	0.78%
baby	727	0.74%
electronics	668	0.68%
stationery	576	0.58%
office_furniture	495	0.50%
pet_shop	466	0.47%
fashion_bags_accessor..	416	0.42%
Null	340	0.34%
home_appliances	241	0.24%
construction_tools_con..	209	0.21%
luggage_accessories	198	0.20%
consoles_games	197	0.20%
musical_instruments	181	0.18%
small_appliances	151	0.15%
home_construction	143	0.14%
audio	121	0.12%
market_place	98	0.10%
books_general_interest	96	0.10%
books_technical	95	0.10%

Top Product Categories

Top product Category

toys

74,604

auto

Distinct count of Order ..

1   74,604

Product Category Name. Color shows distinct count of Order Id. Size shows distinct count of Order Id. The marks are labeled by Product Category Name.
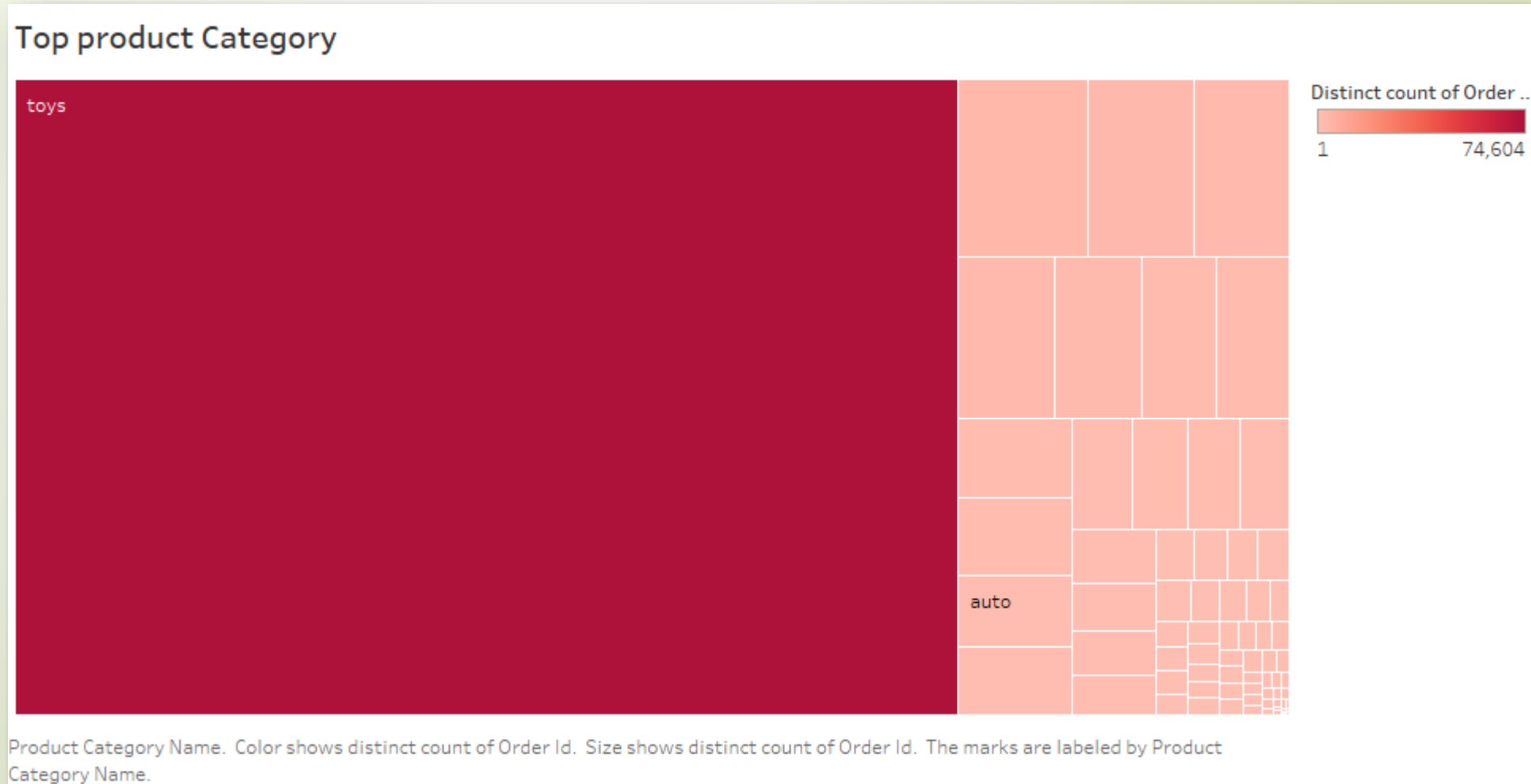
Revenue Pareto

Revenue Pareto

Product Id (Prod..	Revenue	% of Total Rev..	% of Total Pro..	Total order
bb50f2e236e5e..	63,885	0.47%	0.00%	187
6cdd53843498f..	54,730	0.87%	0.01%	151
d6160fb7873f1..	48,899	1.23%	0.01%	35
d1c427060a0f7..	47,215	1.58%	0.01%	323
99a4788cb2485..	43,026	1.90%	0.02%	467
3dd2a17168ec8..	41,083	2.20%	0.02%	255
25c38557cf793..	38,907	2.48%	0.02%	38
5f504b3a1c75b..	37,734	2.76%	0.02%	63
53b36df67ebb7..	37,683	3.04%	0.03%	306
aca2eb7d00ea1..	37,609	3.32%	0.03%	431
e0d64dcfaa3b6..	31,787	3.55%	0.03%	194
d285360f29ac7f..	31,624	3.78%	0.04%	122
7a10781637204..	30,468	4.01%	0.04%	142
f1c7f353075ce5..	29,997	4.23%	0.04%	150
f819f0c84a64f0..	29,024	4.44%	0.05%	45
588531f8ec37e..	28,292	4.65%	0.05%	19
422879e10f466..	26,577	4.85%	0.05%	352
16c4e87b98a93..	25,034	5.03%	0.05%	13
5a848e4ab52fd..	24,229	5.21%	0.06%	194
a62e25e09e05e..	24,051	5.38%	0.06%	172
2b4609f8948be..	22,717	5.55%	0.06%	259
fd0065af7f09af..	22,000	5.71%	0.07%	11
a5215a7a9f46c..	21,740	5.87%	0.07%	16
bc4cd4da98dd1..	21,500	6.03%	0.07%	17
389d119b48cf3..	21,441	6.19%	0.08%	311
368c6c730842d..	21,057	6.34%	0.08%	291
461f43be3bdf8..	20,593	6.50%	0.08%	144
52c80cedd4e90..	20,496	6.65%	0.08%	114
53759a2ecddad..	20,387	6.80%	0.09%	287
1dec4c88c685d..	19,965	6.94%	0.09%	35
6f3b5b605d91b..	19,009	7.08%	0.09%	117
19c91ef95d509..	18,889	7.22%	0.10%	155
1a080577618e7..	18,263	7.36%	0.10%	32
165f86fe8b799..	17,821	7.49%	0.10%	109
fb01a5fc09b9b9..	16,732	7.61%	0.11%	24
e7cc48a9daff54..	16,216	7.73%	0.11%	64
a04087ab6a96f..	15,785	7.85%	0.11%	23
e53e557d5a159..	15,439	7.96%	0.12%	156
601a360bd2a91..	15,160	8.07%	0.12%	119
d5991653e037c..	15,112	8.18%	0.12%	57
470433f95ba90..	14,999	8.29%	0.12%	5
c4baedd846ed0..	14,989	8.40%	0.13%	143
431d674f9a4fb..	14,818	8.51%	0.13%	48
7814c273ab167..	14,772	8.62%	0.13%	58
87feb07adc221..	14,770	8.73%	0.14%	7
f49e985b4cb2d..	14,590	8.84%	0.14%	19
8c591ab0ca519..	14,492	8.94%	0.14%	129
35afc973633aa..	14,485	9.05%	0.15%	156
af51d485dc525..	14,483	9.16%	0.15%	54
8c292ca193d32..	14,139	9.26%	0.15%	86
7c1bd920dbdf2..	13,867	9.36%	0.15%	225
4aa6014eceb68..	13,686	9.46%		45

Marker Basket Analysis

Product Category Name	toys	bed_bath_table	furniture_decor	computers_accessori..	health_beauty	housewares	watches_gifts	sports_leisure	garden_tools	auto	fashion_bags_acces..	stationery	telephony	perfumery	baby	cool_stuff	pet_shop	office_furniture	construction_tools..	costruction_tools_g..	luggage_accessories
toys	1,960	294	156	104	83	63	73	61	45	40	42	31	32	32	21	24	23	18	12	11	1
bed_bath_table	294	50	6		1	2												1			
furniture_decor	156	6	27		1		1		3						1						
computers_acce..	104			7		2			2							1					
health_beauty	83	1			19		1	2										1			
housewares	63	2	1	2		15		1	1												
watches_gifts	73		1		1		8														
sports_leisure	61					2	1	9	2	1						1			1		
garden_tools	45		3	2			1	2	6						1						
auto	40							1		7											
fashion_bags_a..	42										3					1					
stationery	31											8									
telephony	32												7								
perfumery	32													5							
baby	21		1				1				1				7						
cool_stuff	24			1				1													
pet_shop	23																4				
office_furniture	18	1						1										5			
Null	15				1			1								1					
construction_to..	12				1														4		
costruction_tool..	11	3																		3	
luggage_access..	11			1																	

Insights

- Highest ordered category is toys.

- Some products have high sells even the price of the product is high.

- Top most correlation with toys and other categories. While the other have very low correlation.

- Toys are mostly buy with bed_bath_table, furniture_decor, computer_accessories

Recommendation

- The company should take care of the customers who buy the goods again and again by offering them discounts.

- The company can reduce some of the sub categories which have very low sells.

- And give good discounts/offer to capture the customers.