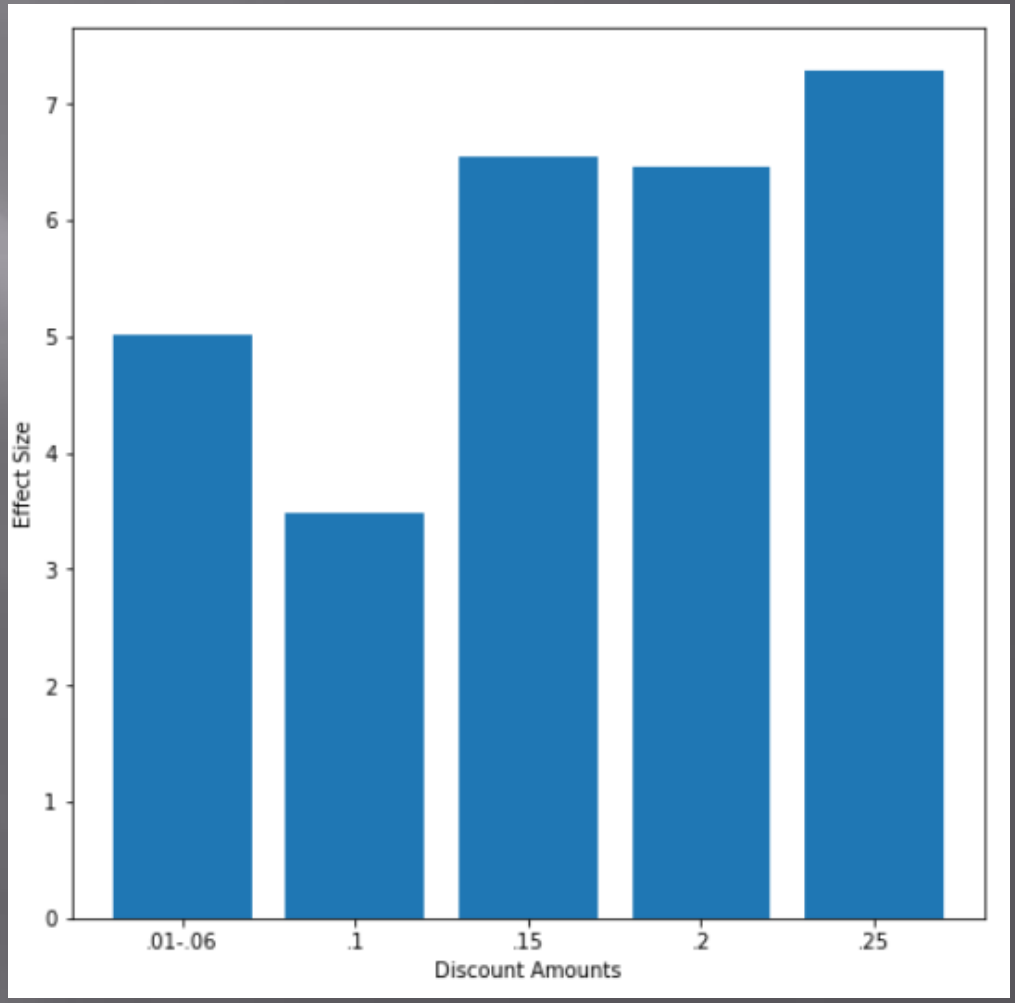
HYPOTHESIS TESTING WITH THE NORTHWIND DATABASE

- Discount Levels
- Product sales by product
- Product sales by category
- Best employee by sales amount

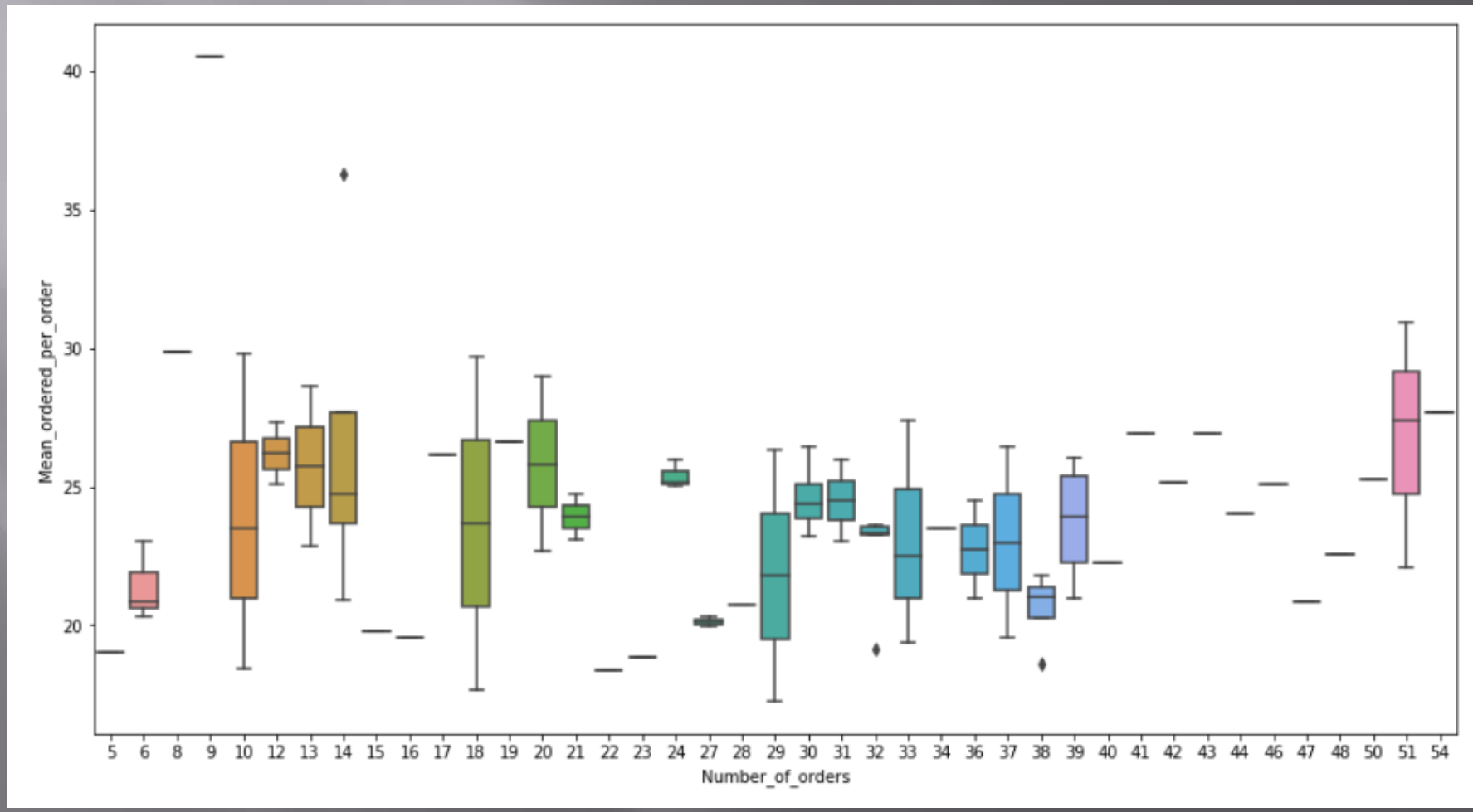
Discount Levels

- Difference between the mean sales by quantity of each discount level and the mean sales by quantity of the non-discount sales



Product sales by product

- Finding a range that will find the best products



Product sales by product

- Mean > 26
  Number of orders > 38

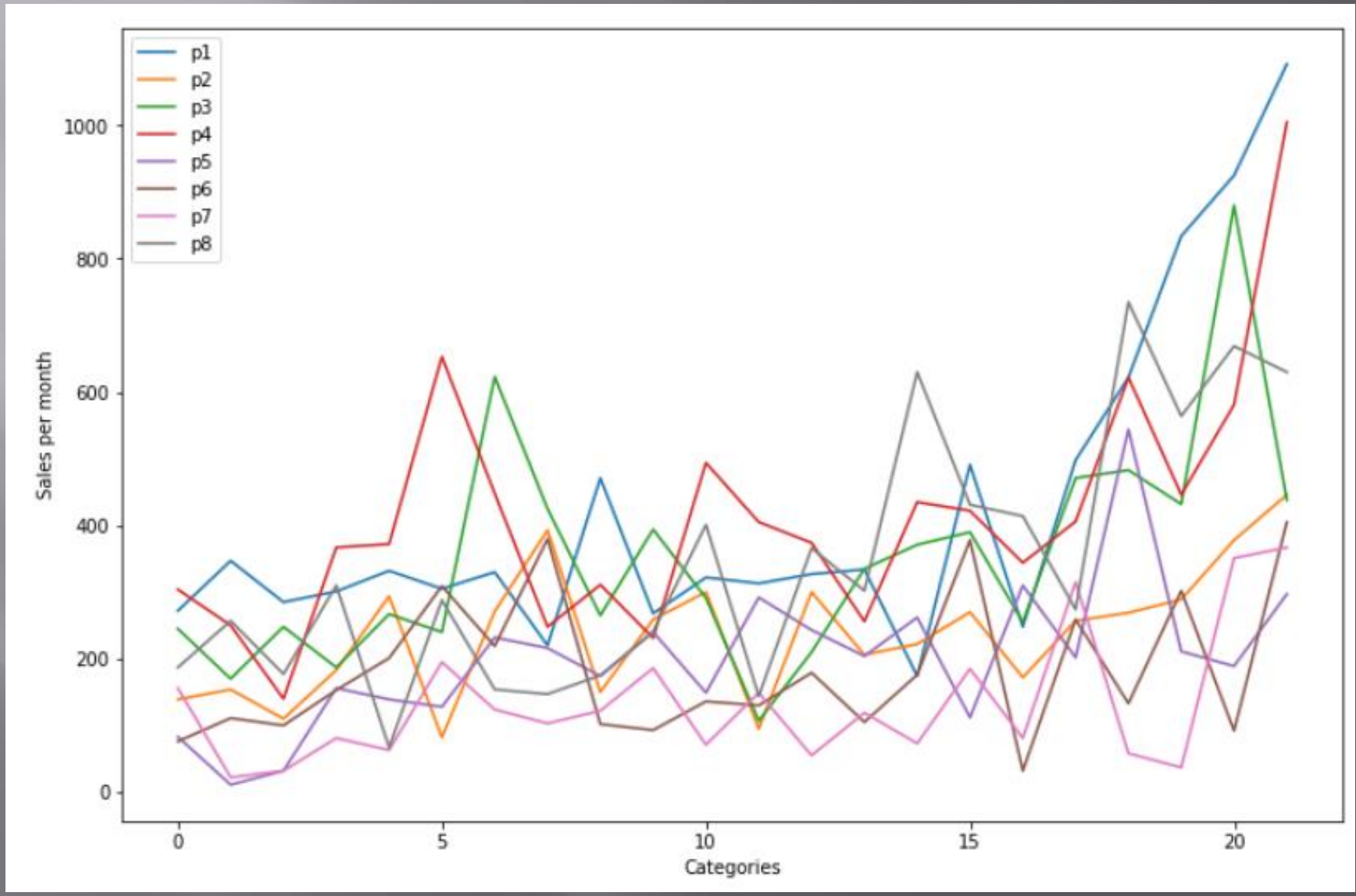
	ProductId	Mean_ordered_per_order	Number_of_orders	Total_ordered
15	16	26.930233	43	1158
20	21	26.051282	39	1016
30	31	27.392157	51	1397
39	40	26.902439	41	1103
58	59	27.703704	54	1496
59	60	30.921569	51	1577

- Total ordered over 1015, that are not in the above list

	ProductId	Mean_ordered_per_order	Number_of_orders	Total_ordered
55	56	25.260000	50	1263
74	75	25.108696	46	1155
23	24	22.058824	51	1125
61	62	22.562500	48	1083
1	2	24.022727	44	1057
70	71	25.166667	42	1057

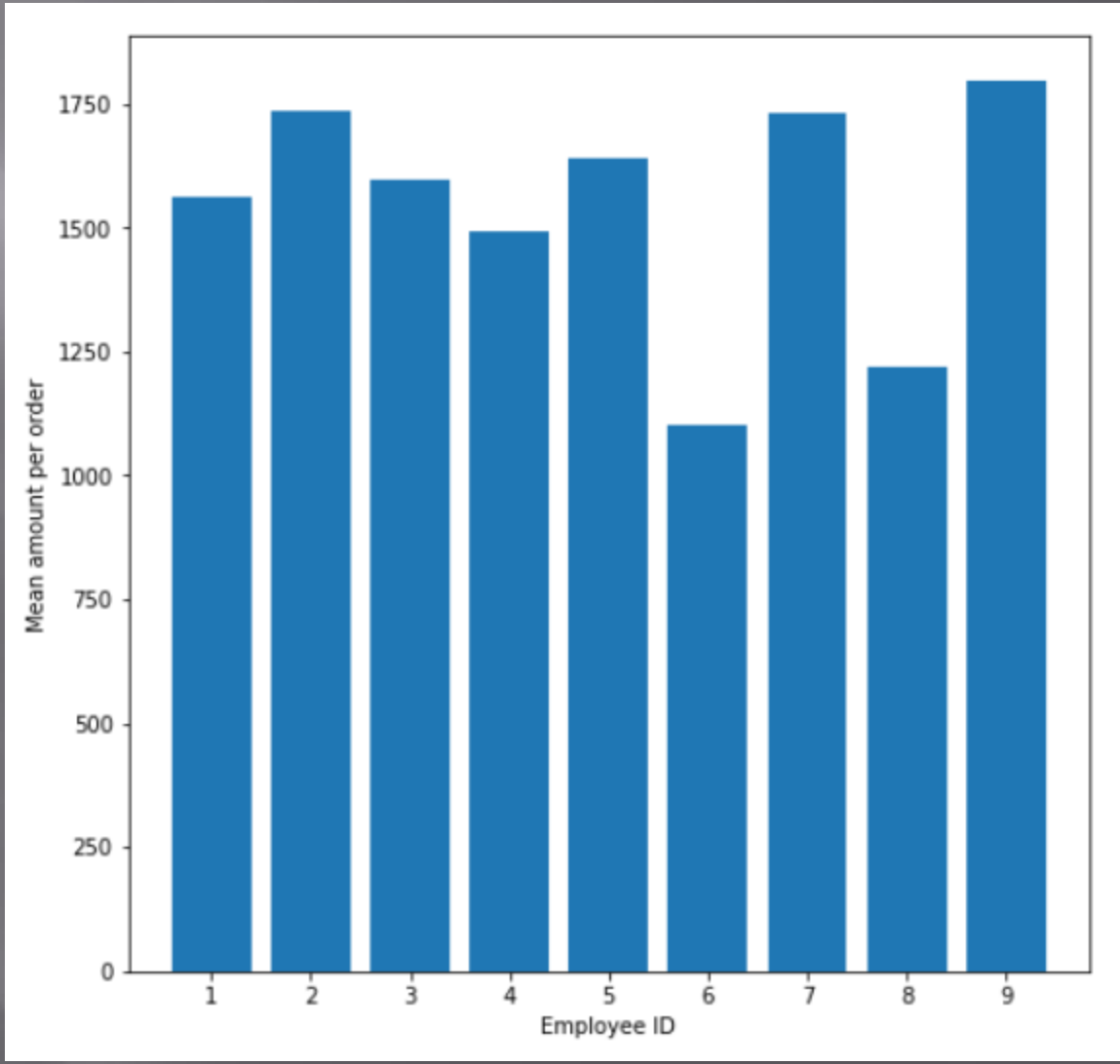
- Best product: Number 60

Product sales by category



Best employee by sales amount

- Can not find an Employee that is statistically, significantly better by mean sold per sale



Recommendations

1. Using .05%, .15%, .20% and .25% as discount amounts to try and drive sales.
2. I would suggest the company focus on 60, 16 and 31
3. Focusing on seeing what other products can be sold in categories 1,3,4 and 8
   At the same time try to get better at selling in the other categories 2,5,6 and 7
4. I can not make any recommendations with regards to the best employee

Further Work

1. Looking into 10% discounts to see if more can be found out about it
2. Checking which is the best discount for an item based on profit margins
3. Looking more into the other products that preformed best based on mean per order and total quantity sold
4. Doing more research into seeing if there is a way to figure out the best employee

Thank you for watching.

Have a great rest
of your day!

Levi Raichik