

Northwind Customer Analysis

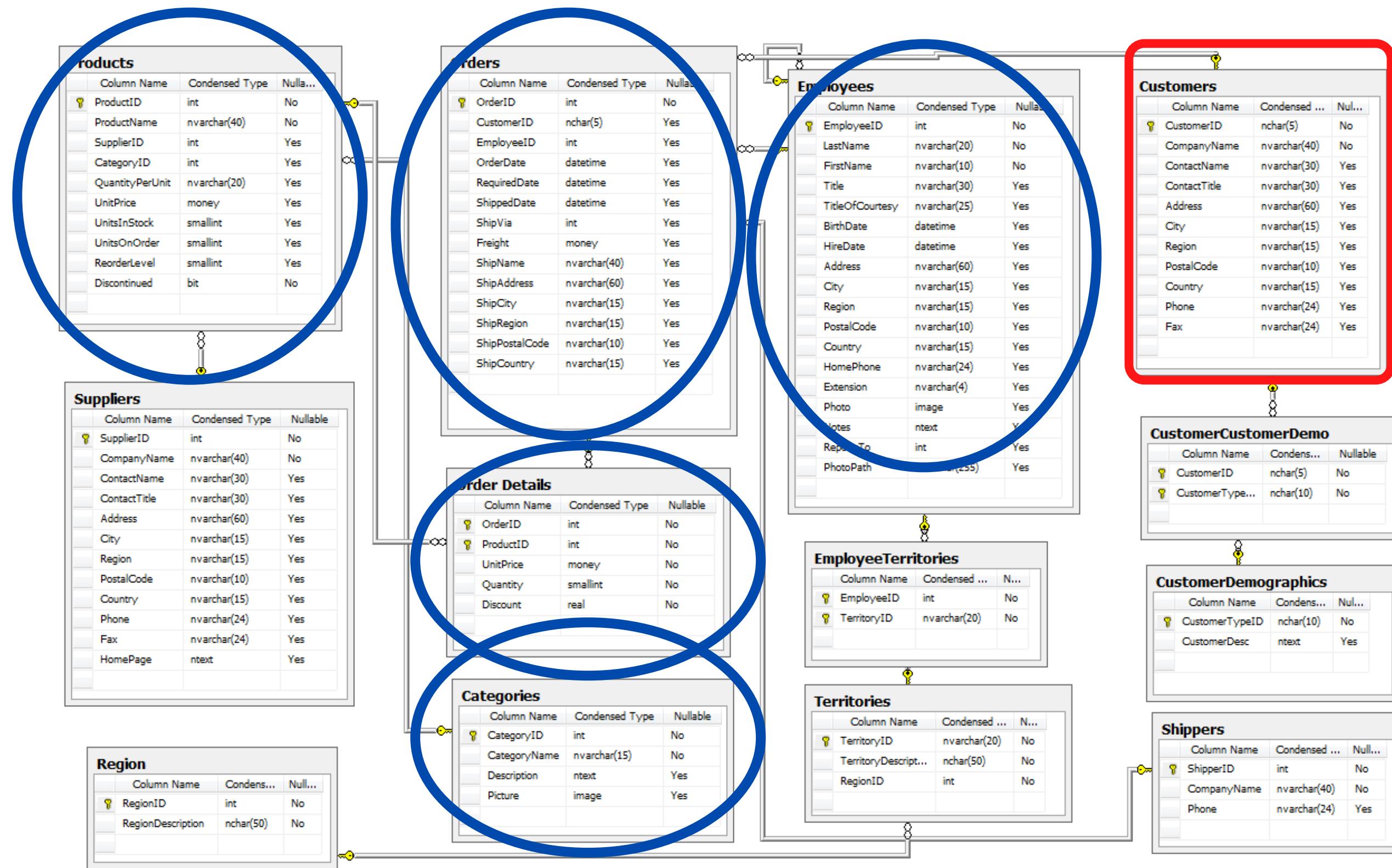
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03 June 2022



Problem Statement

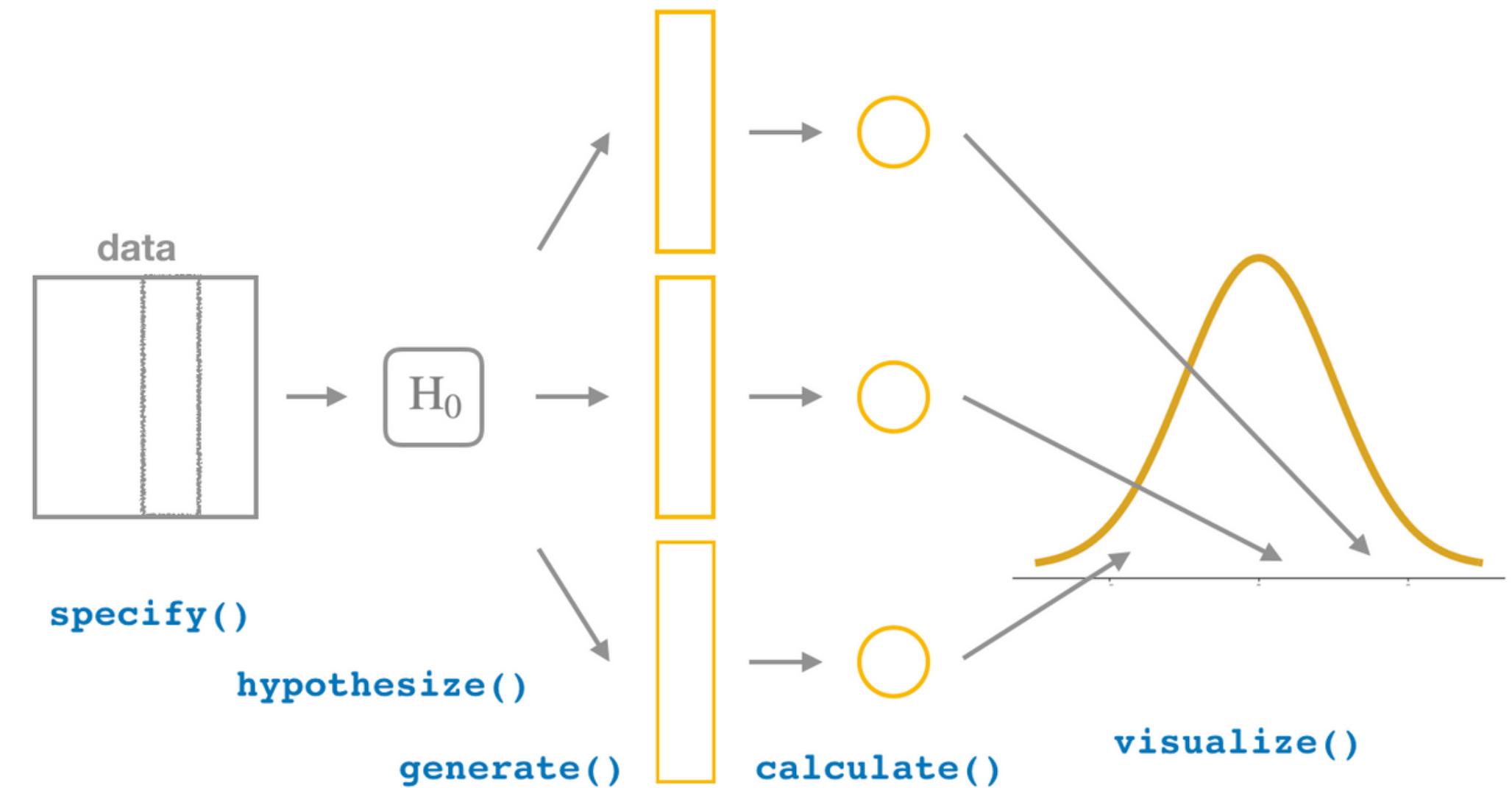
- Sales growth over the period in Northwind
- The top 5 loyal customers by amount of orders
- The top 5 customers by the average purchase
- Top product category ordered by customers
- Correlation between purchase amount and delivery time towards company profit
- Best-selling products by quantity orders
- Top employees/salesperson who made high revenue by the number of clients they handle

Northwind Database



Hypothesis test

Hypothesis Testing



Key features

Customer name
Shipped date
Required date
Selling price
Buying price
Ordered quantity
Product category



Findings I

Sales growth over the period in
Northwind



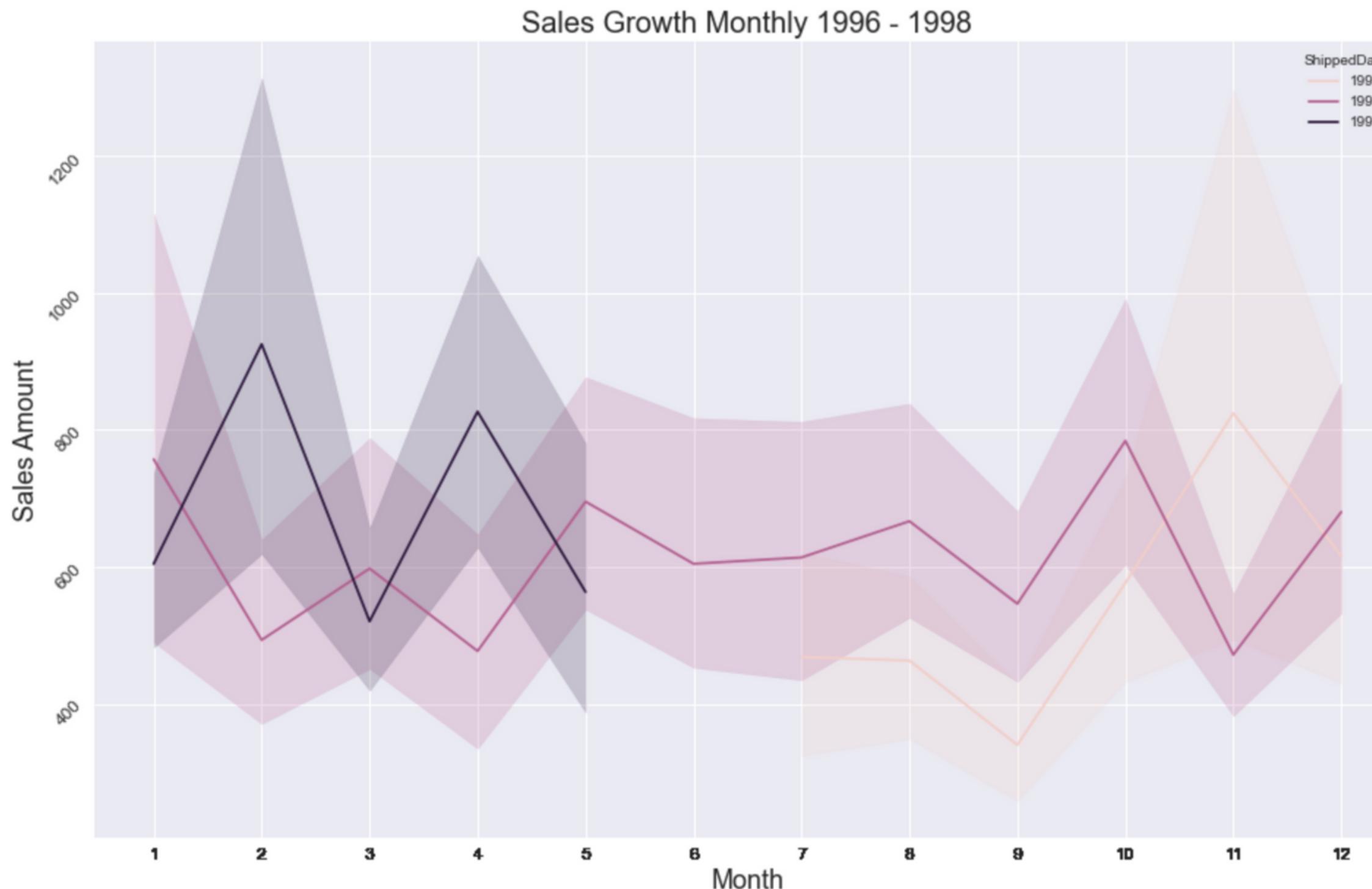
Sales growth 1996 - 1997 (Year)



Total sales

- 1996 : \$226,298
- 1997 : \$658,388
- 1998 : \$469,771

Sales growth 1996 - 1997 (Months)



Key summary

The total sales between July-December in 1996 and 1997, 1997 sales is much higher.

Whereas, total sales in January - May 1997 is significantly lower than in 1998.

Findings

III



The top 5 loyal
customers by amount
of orders

Top 5 loyal customers



Business Recommendations:

Offer Discounts, Reward Customers, Promote loyalty programs, Create loyalty tiers, etc

Findings

III



Top 5 customers by total purchase

Top customers by average purchase

Top 5 Average Total Purchase by Customer 1996-1998



Business Recommendations:

This information worth to know by the stakeholders so they are aware who are those customers that contributed to their products purchase. It might something the can be considered how to maintain their behaviour in buying the products with us.

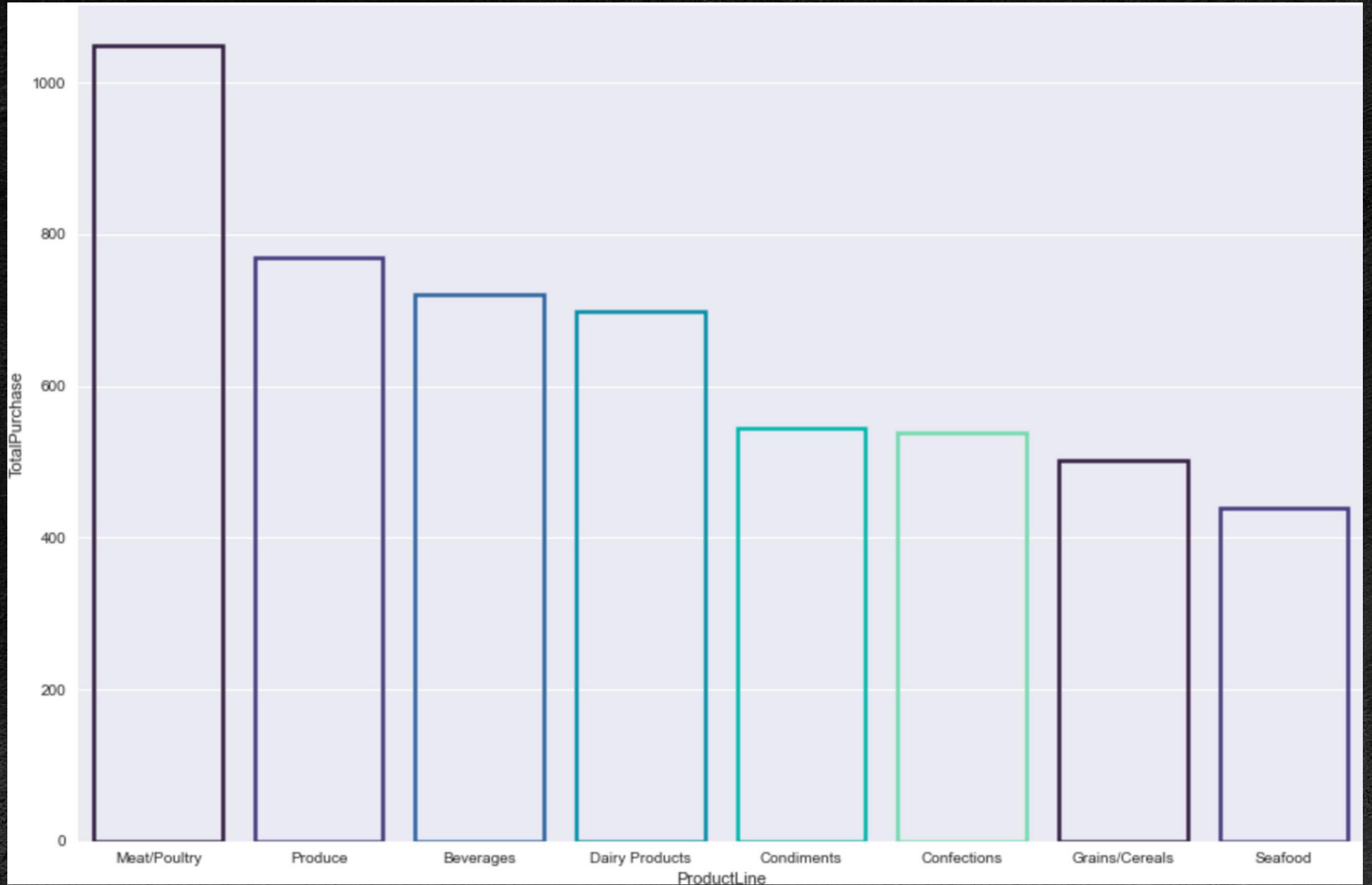
Findings

IV



Top product category ordered
by customers

Top product category



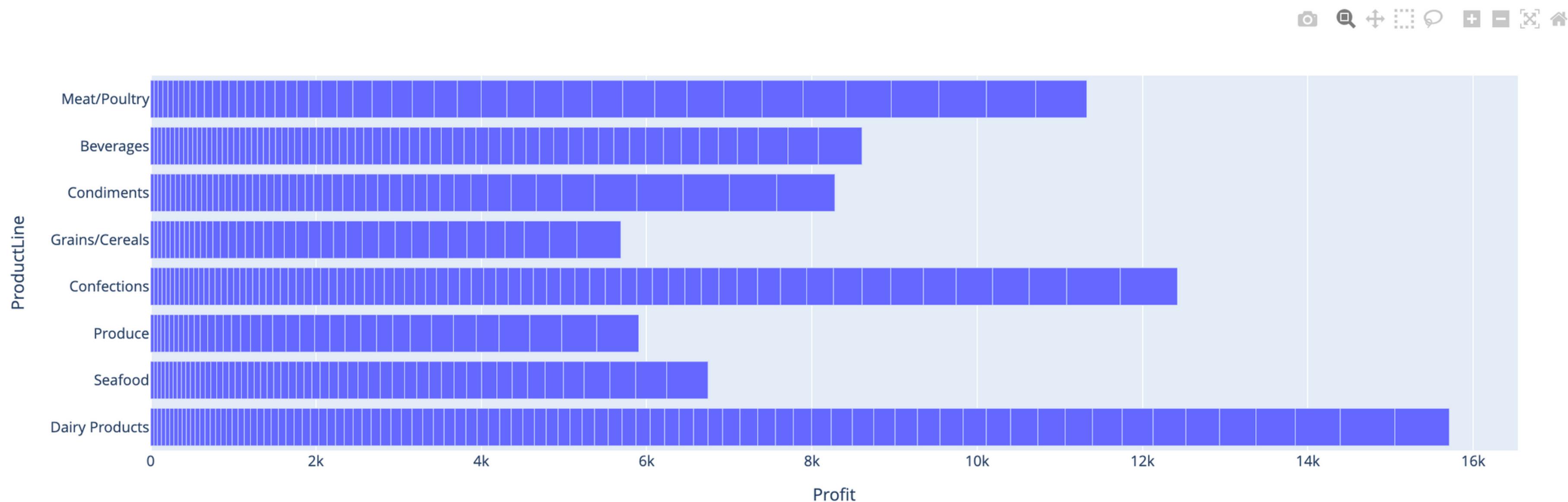
The highest purchase lies on **Meat/Poultry category**. The total average purchase on Meat/Poultry is USD 1,048 in compared to other category that only below \$1,000.

Findings v

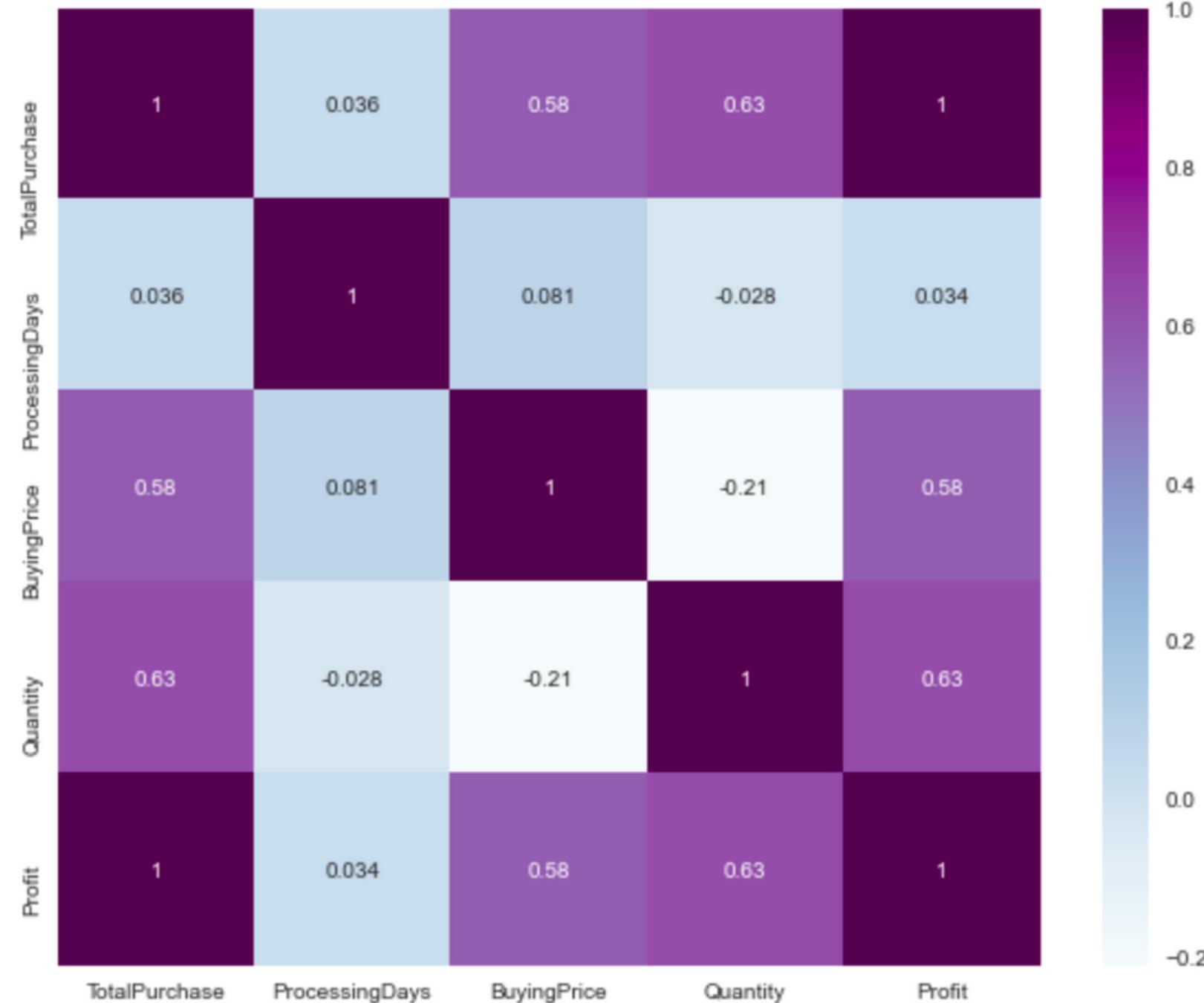


Correlation between
purchase amount and
delivery time towards
company profit

The most product that generate more profits to the company is: Dairy Product, Confections, Meat Poultry. It can be something to consider by management to give more discount to customers with faster ship delivery for these products. However, let's take a look if any correlation between those variables towards profit.



Correlation



The only variable that have a fair correlation toward Profit is BuyingPrice with 0.58.

TotalPurchase is the highest one at 1.00.

There are no correlation between ProcessingDays and Profit. So, no matter how fast or slow the delivery time of the products, it doesn't effect to the company's profit.

Findings

vi

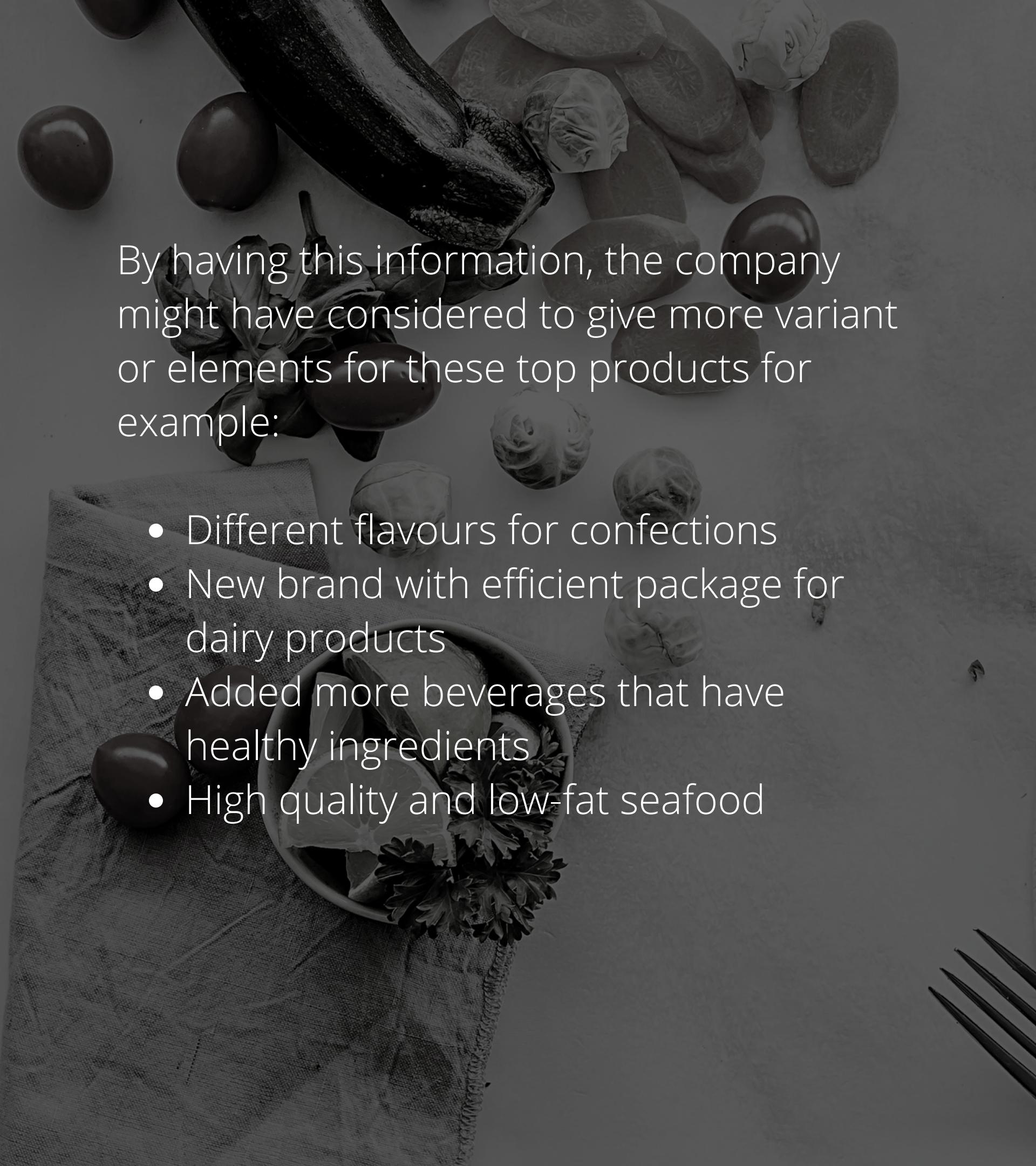
Top orders by category and country



Best-selling products

Top Orders by Category & Country





By having this information, the company might have considered to give more variant or elements for these top products for example:

- Different flavours for confections
- New brand with efficient package for dairy products
- Added more beverages that have healthy ingredients
- High quality and low-fat seafood



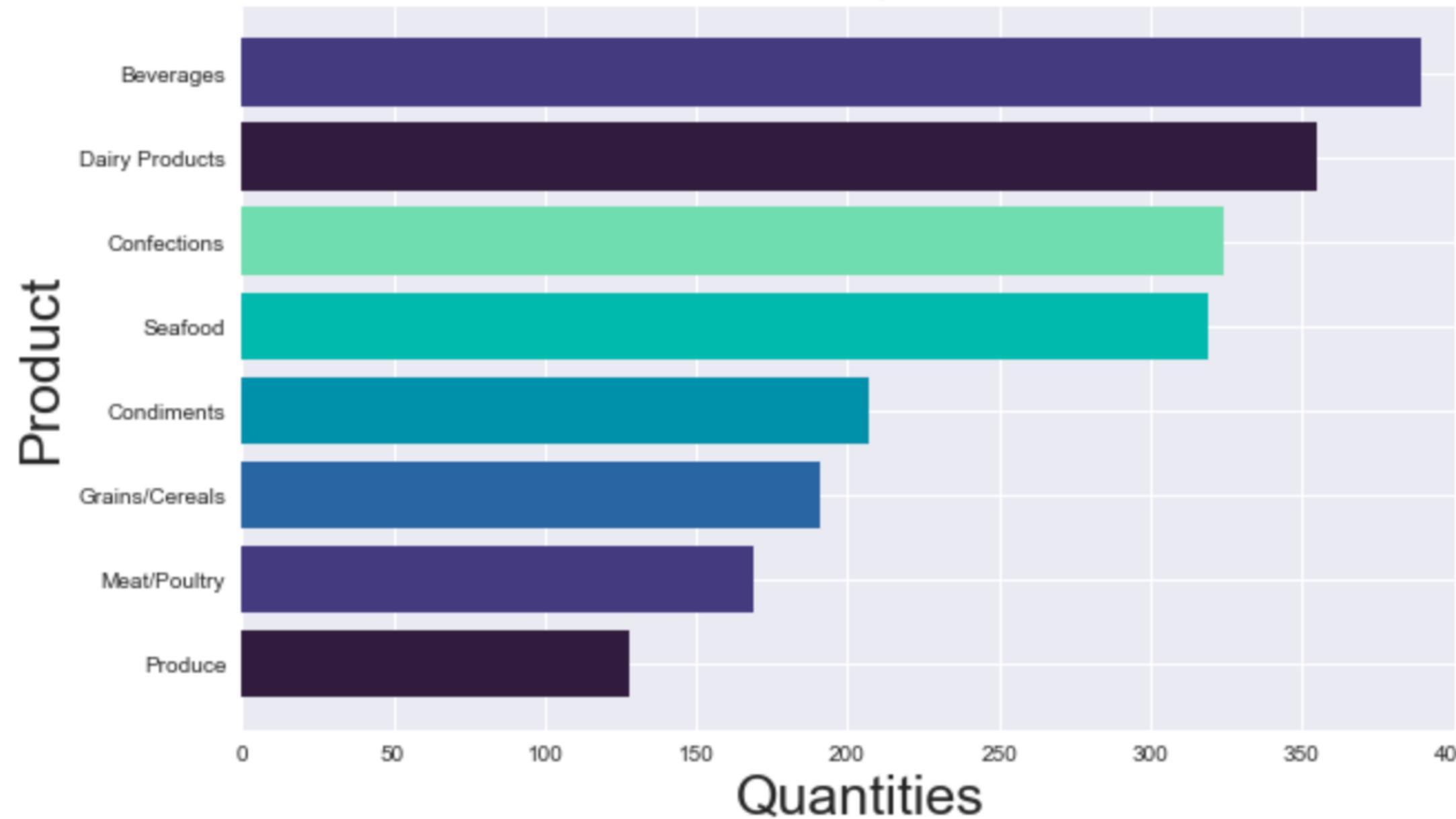
Findings

vii



Best-selling products

Product Quantities



The most ordered products by category and customers :

- Beverages: 389
- Dairy products: 355
- Confection: 324
- Seafood: 319

Findings VII



Top Revenue made by
Salespersons

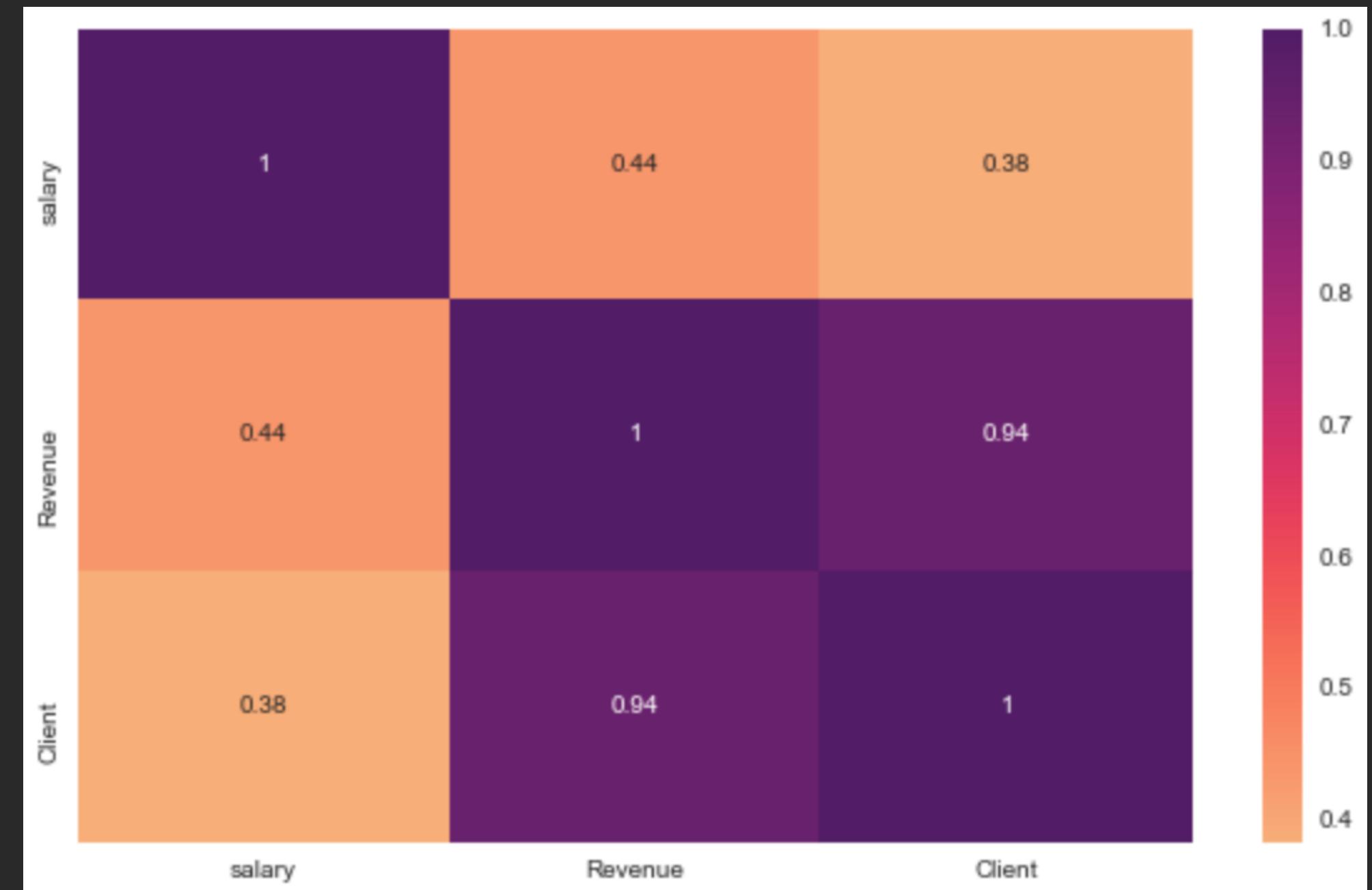


The top 5 salespersons

1. Peacock (420)
2. Leverling(321)
3. Devolio(345)
4. Fuller(241)
5. King(176).

Correlation Revenue x Client x Salary

1. There are correlations between Revenue and Client.
2. The correlation between Salary and Revenue is quite weak only at 0.44.



Business Recommendation:

- Rewards for top loyal customers
- Discounts of unit price for top purchase customers
- Meat/poultry (high unit price + discounts opportunity)
- Increase variant and quality for best selling products
- Bonus rewards to the top salespersons' as appreciation of the revenue in the region.





Thank
you