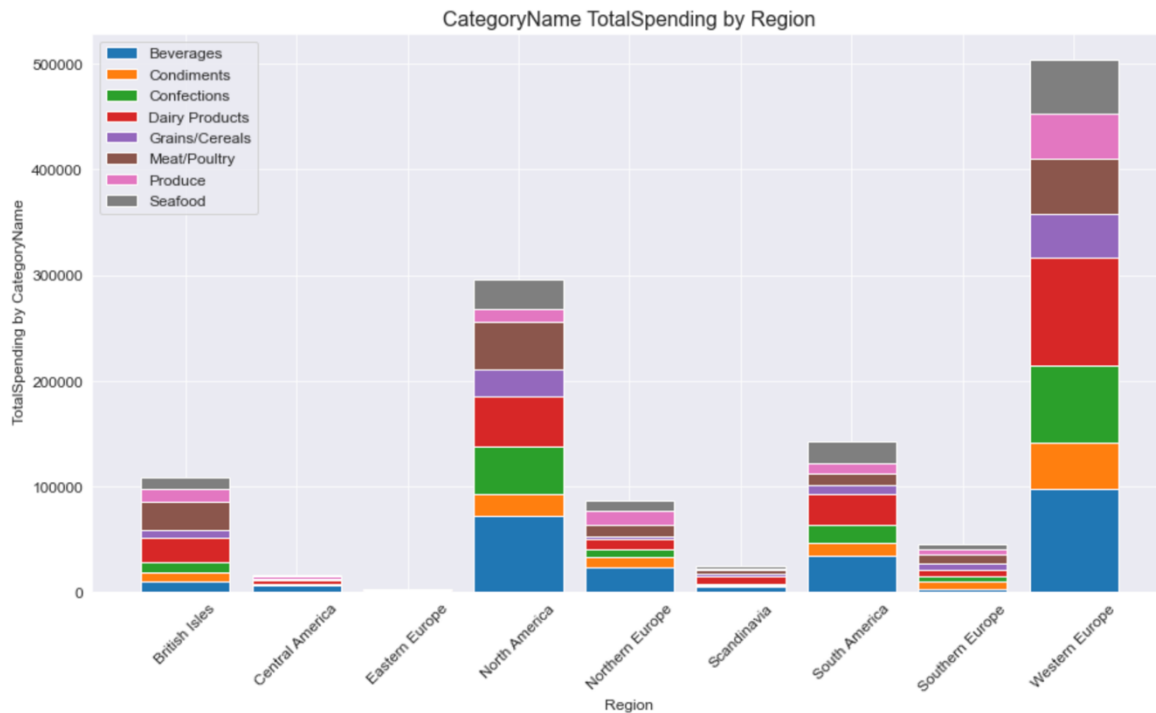# Northwind data analysis for business enhancement

The goal of this project is know is there a relationship between customer region and certain product categories.

To start exploring this goal, I performed an exploratory analysis in Python and SQL that offers insightful and actionable quantitative findings (including visualizations) to my client. After analyzing the database, I also provided insight and recommendations to the Northwinds' 'Stakeholders' to help them grow their bussiness.

These stacked bar graphs give us a cursory idea of proportionally how much of each category every region is ordering, how much money is spent on each category, and the absolute differences in the total number of units and dollars spent by each region.

Region	Product Categories to Market more Aggressively	Product Categories to Market Less Aggressively
British Isles	Dairy Products , Meat/Poultry, Produce	Beverages, , Grains/Cereals , condiments ,Confections
North America	Beverages, Confections,Dairy Products, Meat/Poultry	Produce ,Grains/Cereal ,condiments
Northern Europe	Beverages, Produce	Confections, Dairy Products, Grains/Cereals, Meat/Poultry
Western Europe	Beverages,Dairy Products , Confections	Grains/Cereals, condiments
South America	Beverages, Dairy Products	Grains/Cereals,Meat/Poultry, Produce

These lists detail which regions spend proportionately more on certain categories . This means that the listed product categories are in higher demand in the listed regions than one could normally expect, implying that it should be easier to sell more of those products (and possibly at a higher price) in those regions than others, especially when acquiring new customers.

However, this does not mean that existing sales of low-demand product-region combinations should be neglected to the point where they decrease. This study merely suggests that no additional effort be spent increasing those combinations.