Data Analytics with IBM Cognos Analytics

Assignment 1

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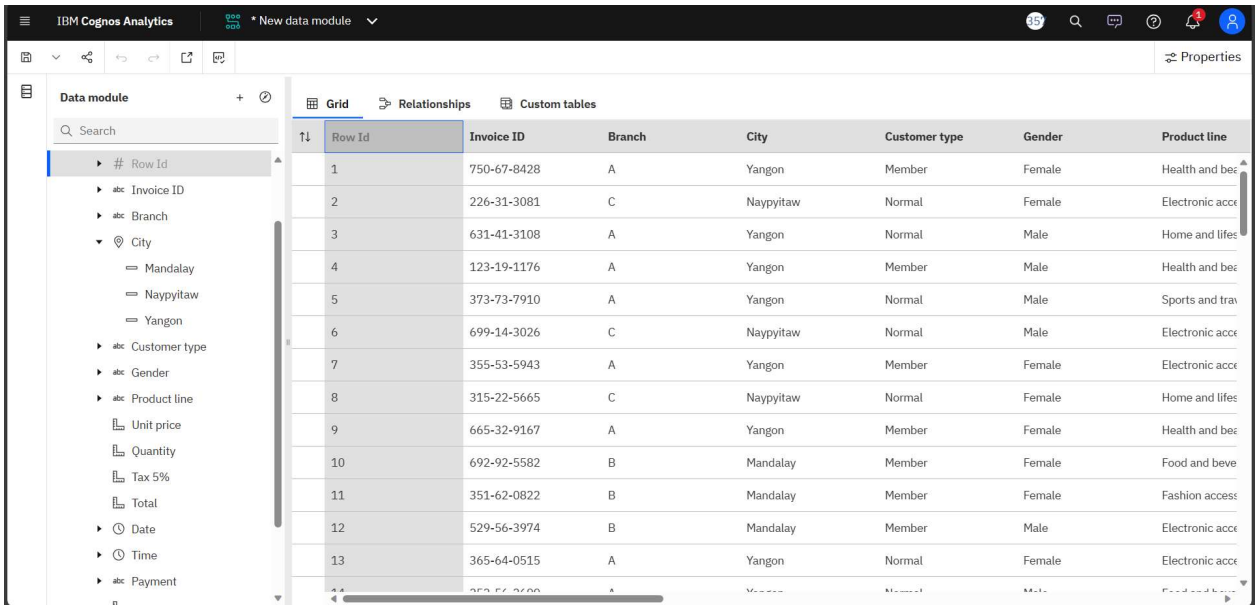
The growth of supermarkets in most populated cities is increasing and market competitions are also high. The dataset is one of the historical sales of a supermarket company which has been recorded in 3 different branches for 3 months. Predictive data analytics methods are easy to apply to this dataset.

Attribute information

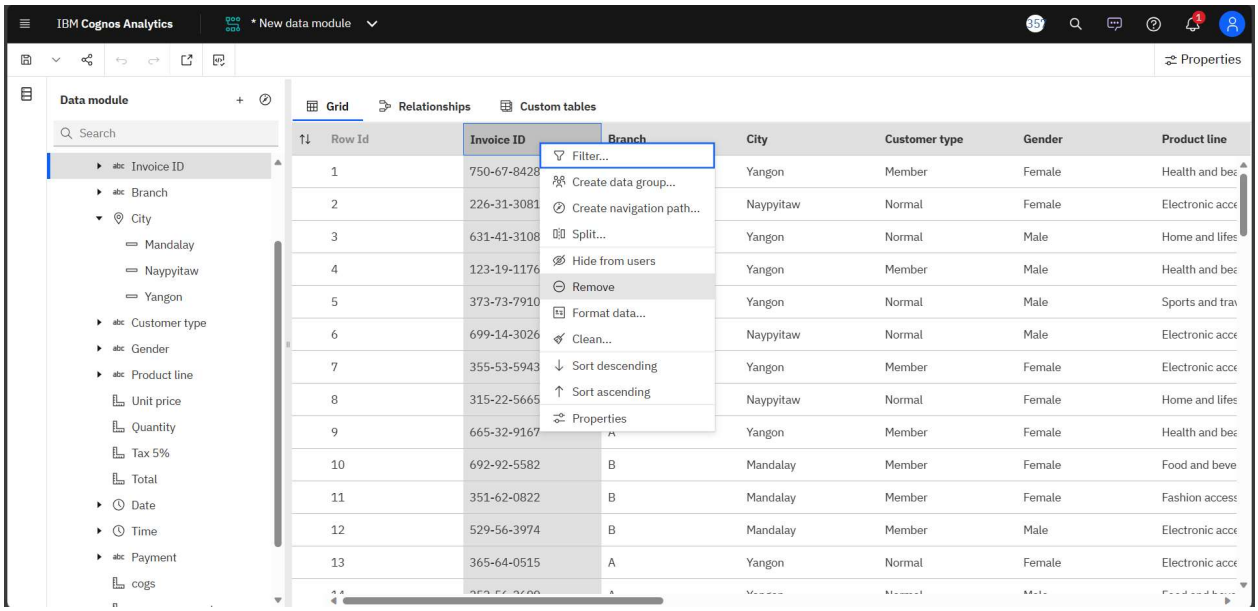
Invoice id: Computer-generated sales slip invoice identification number
Branch: Branch of supercenter (3 branches are available identified by A, B and C).
City: Location of supercenters
Customer type: Type of customers, recorded by Members for customers using member cards and Normal for those without member cards.
Gender: Gender type of customer
Product line: General item categorization groups - Electronic accessories, Fashion accessories, Food and beverages, Health and beauty, Home and lifestyle, Sports and travel
Unit price: The price of each product in $

Quantity: Number of products purchased by the customer
Tax: 5% tax fee for customers buying
Total: Total price including tax
Date: Date of purchase (Record available from January 2019 to March 2019)
Time: Purchase time (10 am to 9 pm)
Payment: Payment used by the customer for the purchase (3 methods are available – Cash, Credit card and Ewallet)
COGS: Cost of goods sold
Gross margin percentage: Gross margin percentage
Gross income: Gross income
Rating: Customer stratification rating on their overall shopping experience (On a scale of
1 to 10)

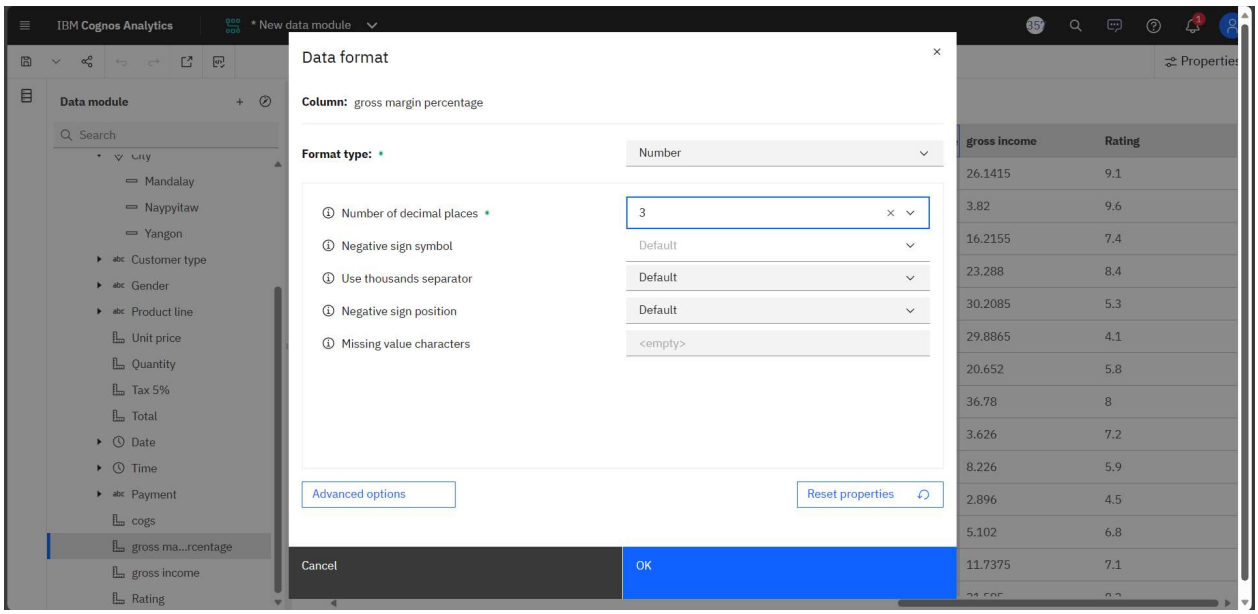
Challenge:
Upload the dataset to Cognos Analytics, delete the unnecessary columns, create a data module, explore and visualize the dataset



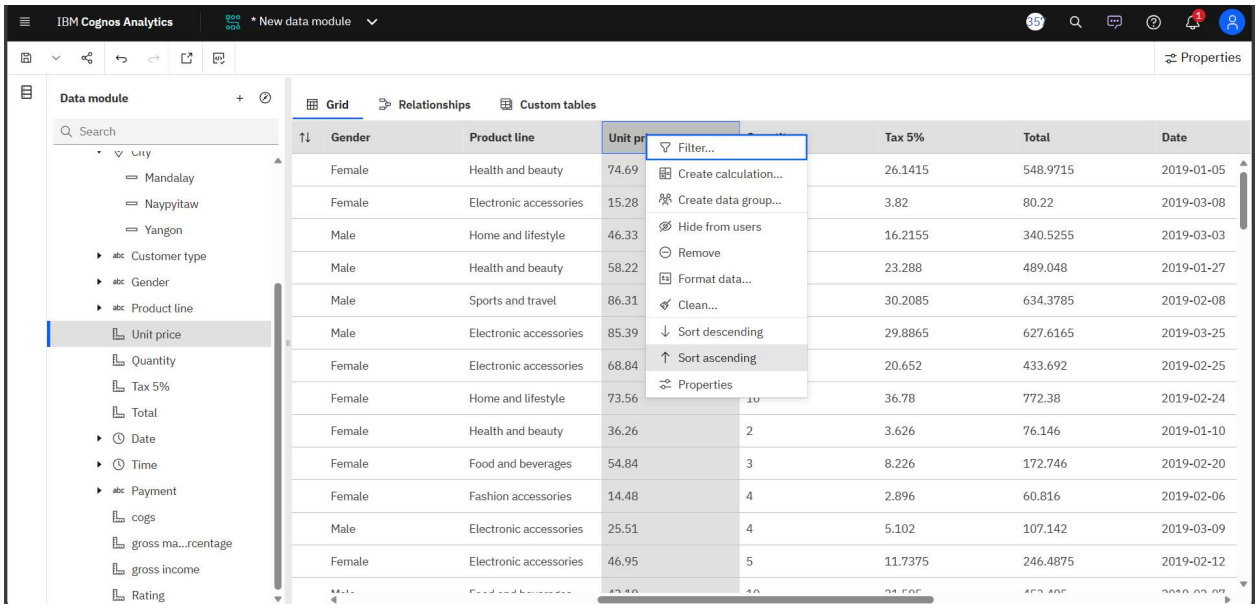
Removing Invoice ID



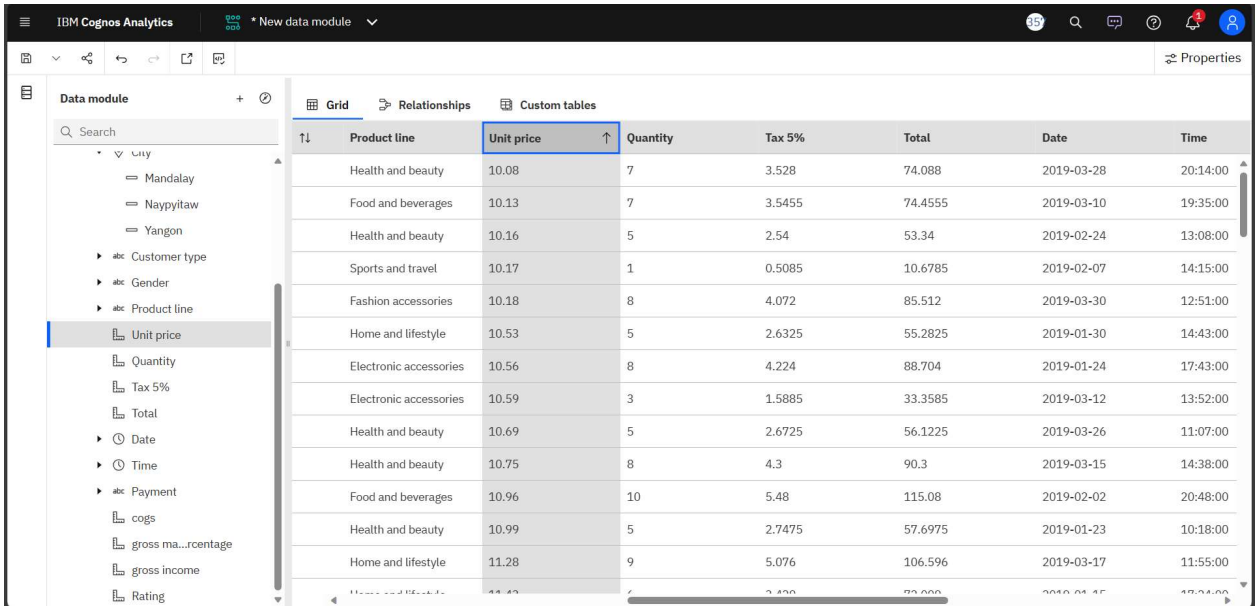
Setting the decimal places of gross margin percentage to 3



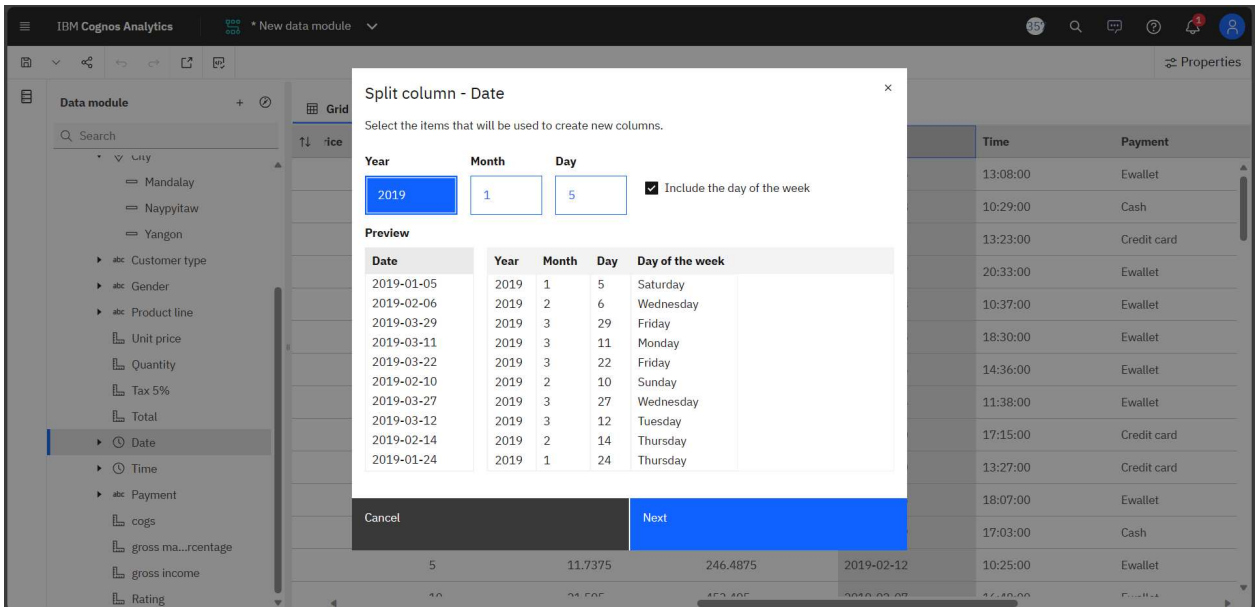
Sorting Unit price in ascending order



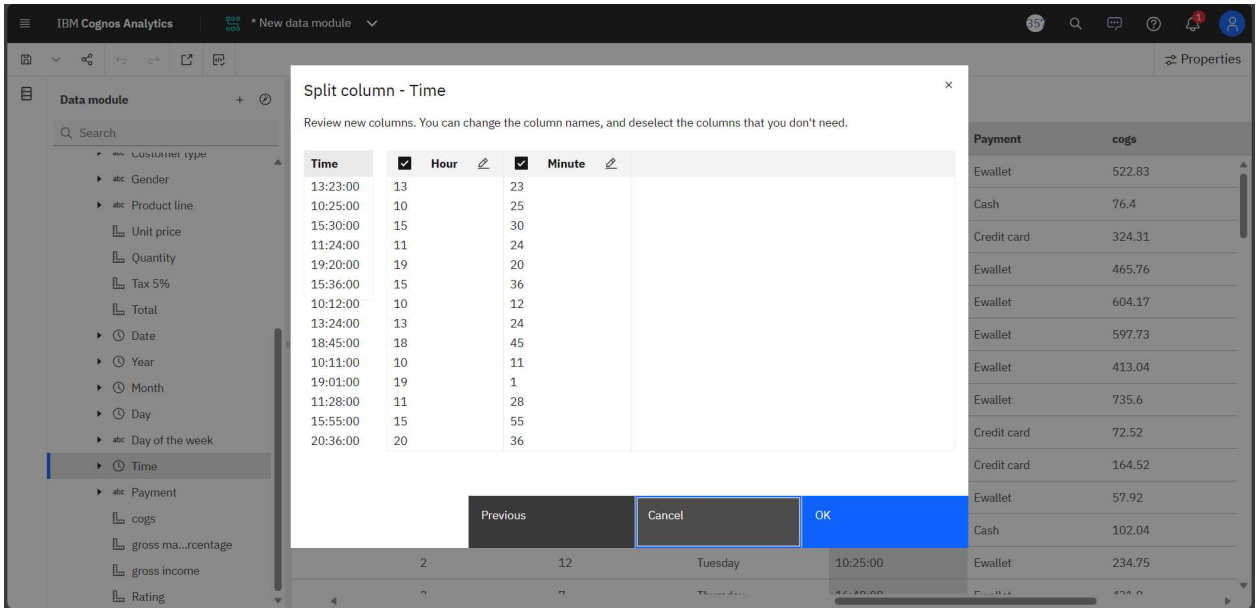
After result:



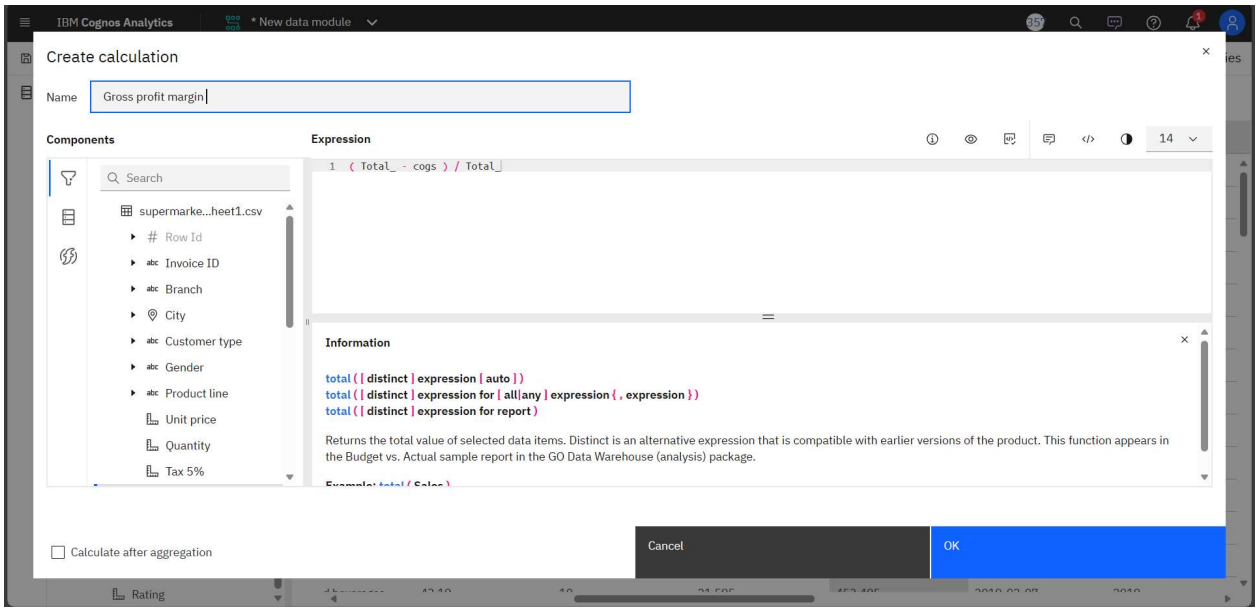
Splitting the date



Splitting time

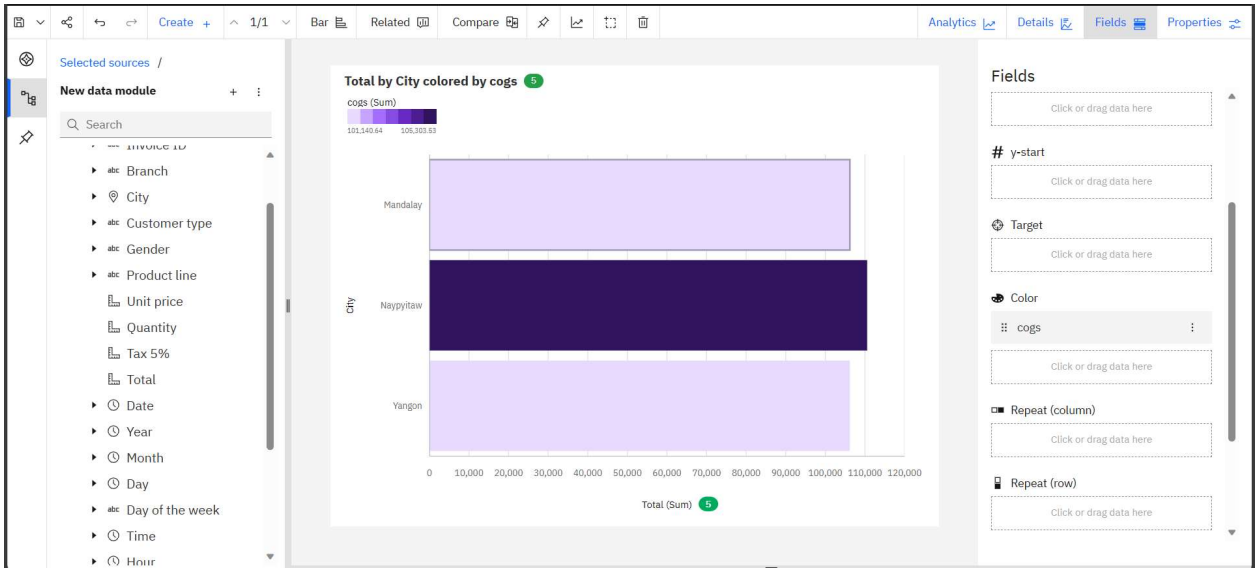


Initializing new column

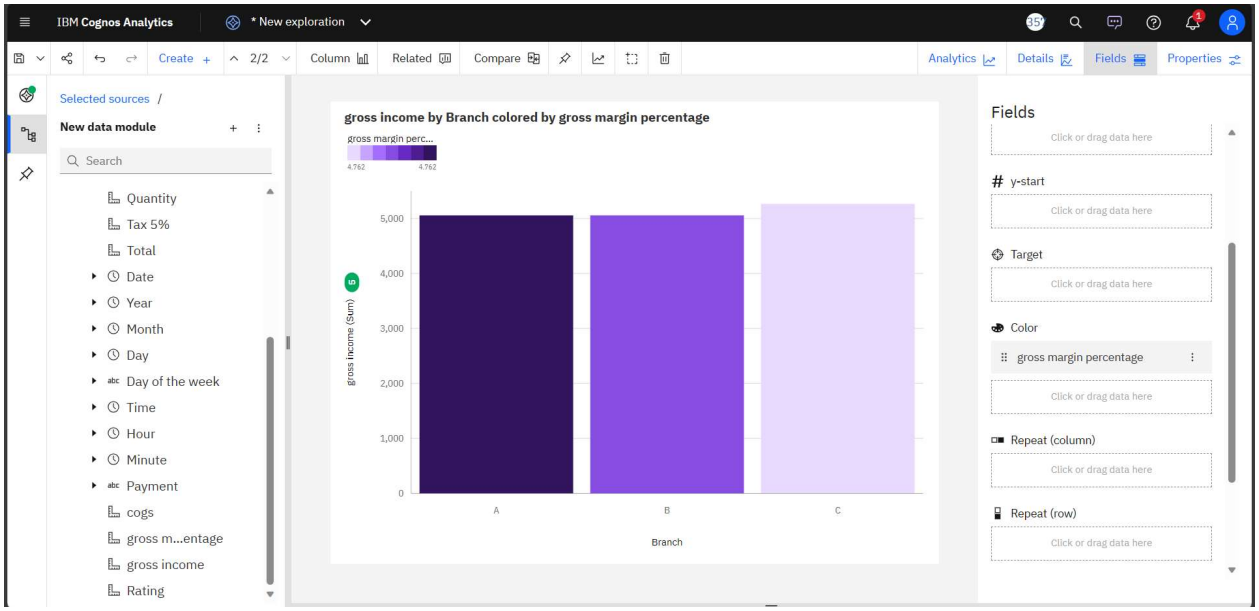


Creating Visualizations

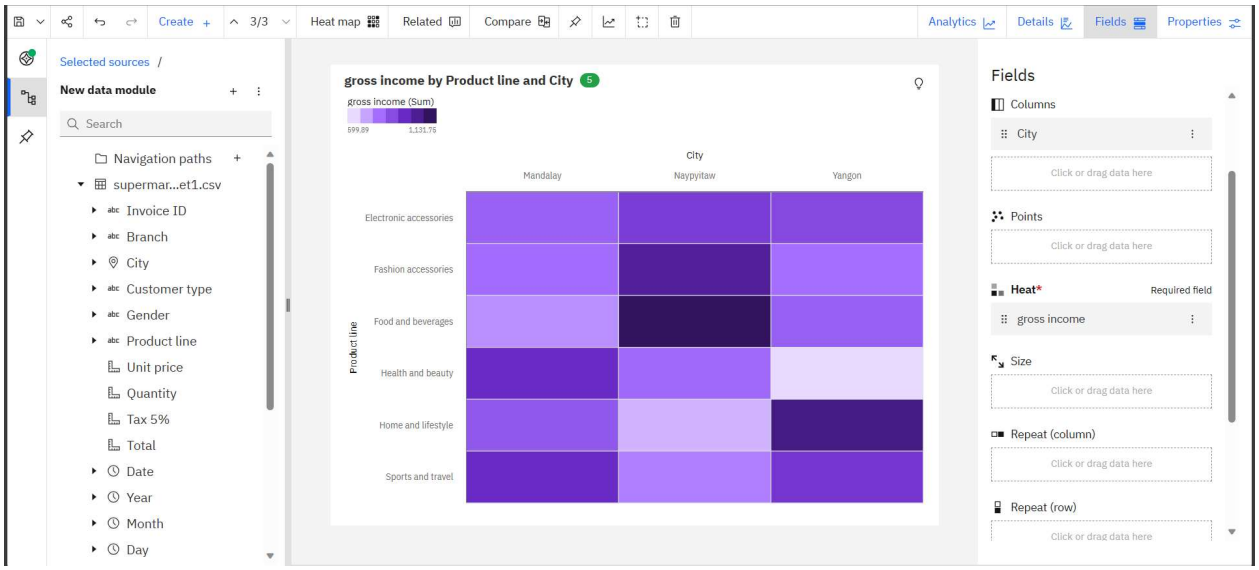
Total revenue by each city colored by cogs - Bar Graph



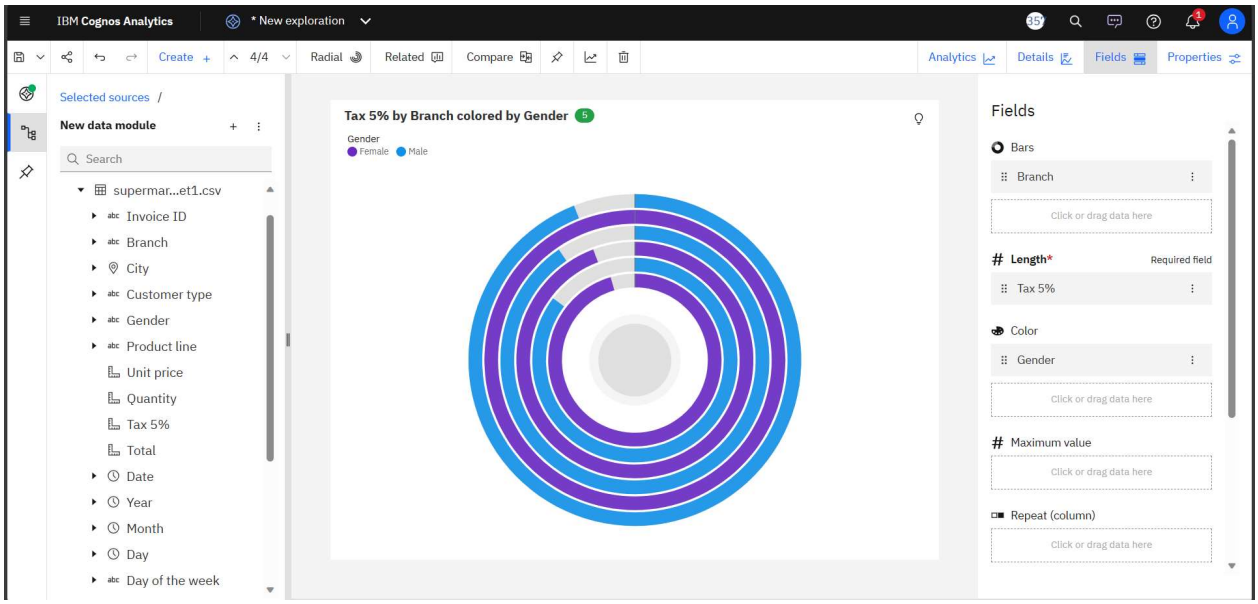
Gross income by branch colored by gross margin percentage
Column Graph



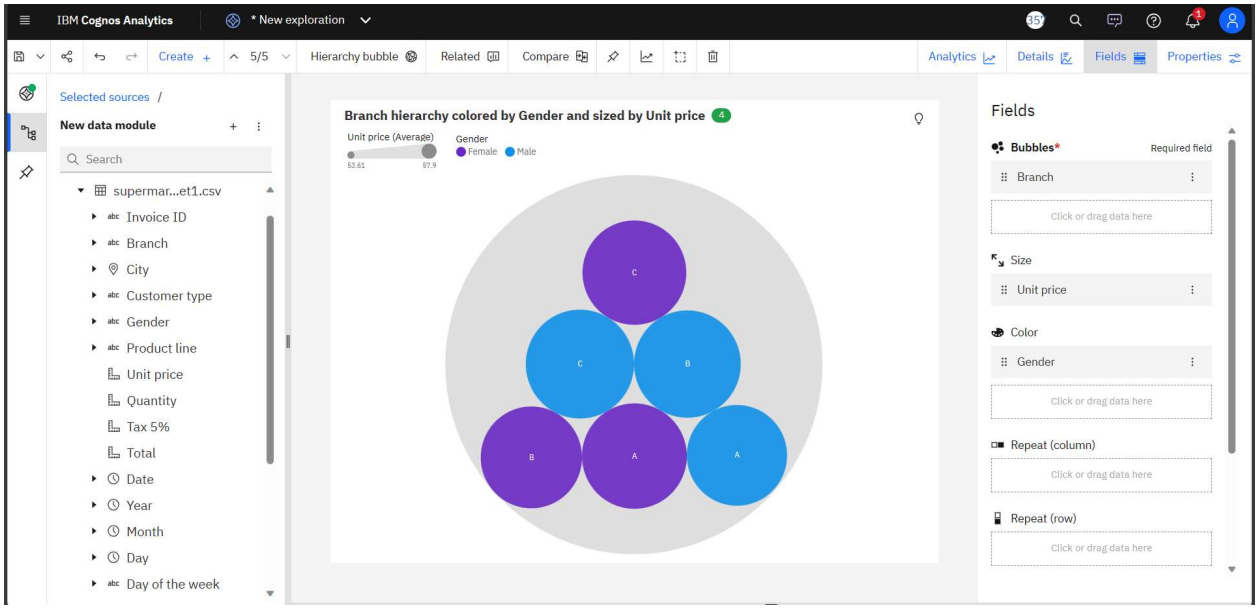
Gross income by product line and city
Heat Map



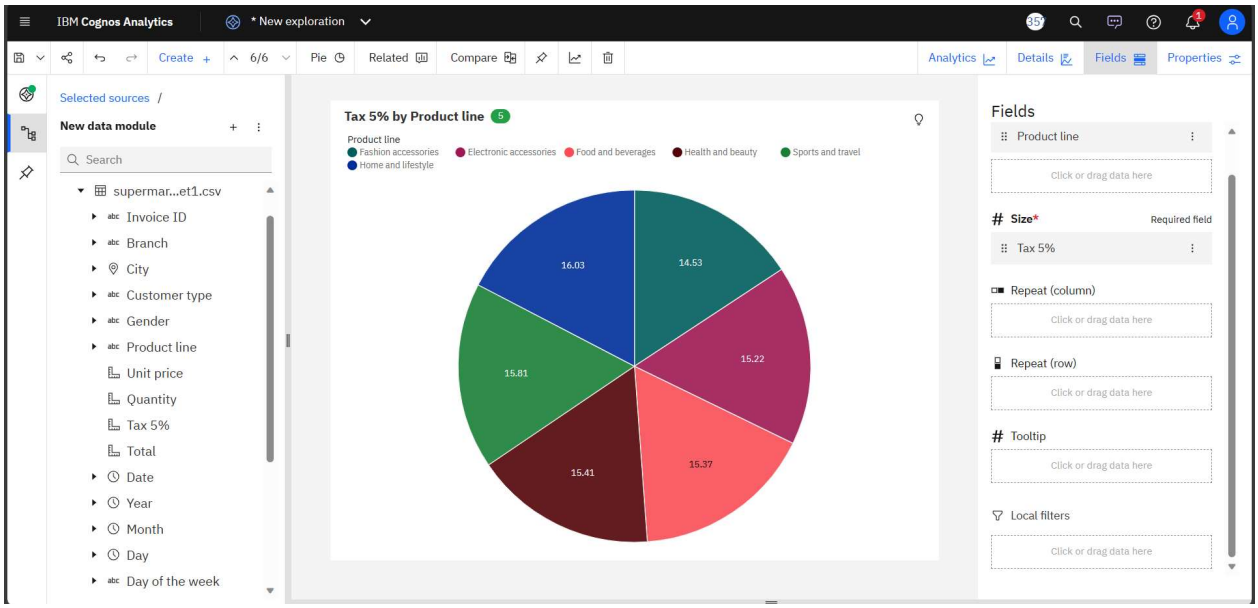
Tax by branch colored by gender
Radial Graph



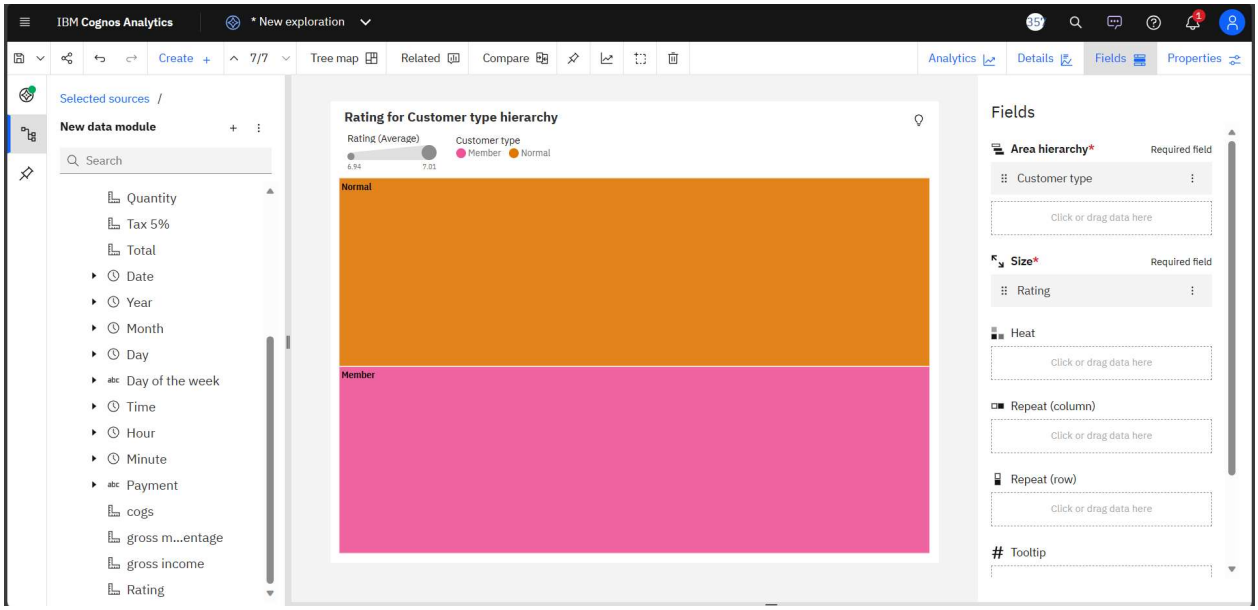
Branch hierarchy colored by Gender and sized by Unit price
Hierarchical bubble



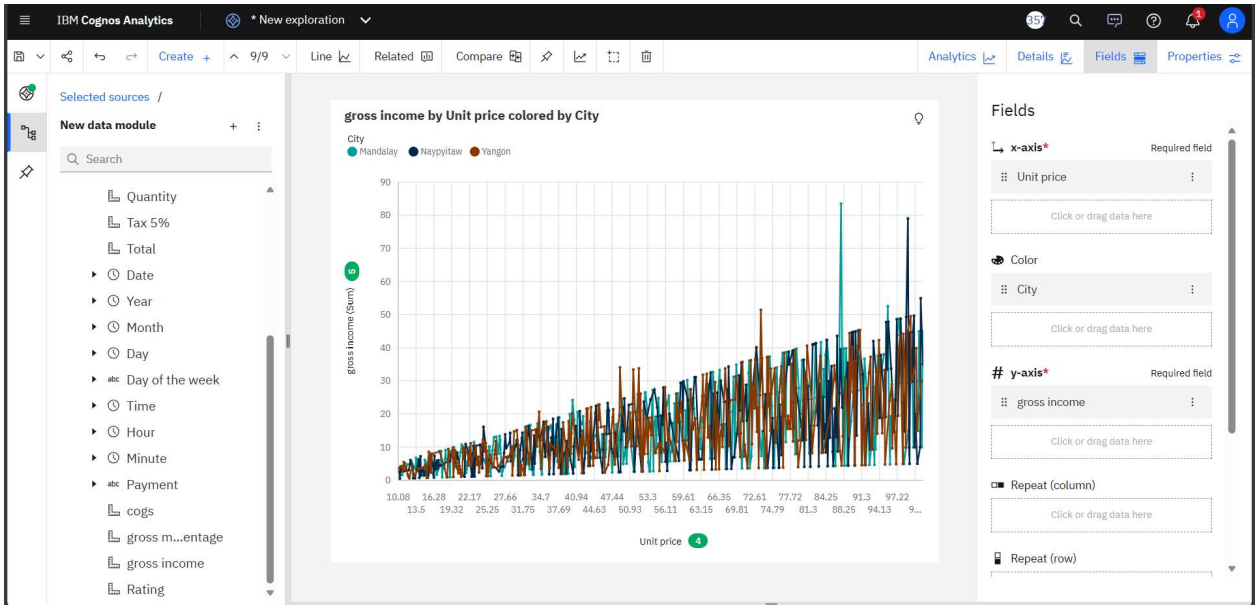
Product line by tax in pie chart



Rating for customer type hierarchy
Tree Map



Gross income by unit price colored by city
Line graph



Quantity and tax with gross income colored by gender for branch
Bubble Chart