

## PROJECT DEVELOPMENT PHASE

### DELIVERY OF SPRINT-2

Date	4 NOVEMBER 2022
TEAM ID	PNT2022TMID00847
PROJECT NAME	GLOBAL SALES DATA ANALYTICS

### SPRINT 2 FUNCTIONAL REQUIREMENT

- > UPLOAD DATASET
- > DATA PREPARATION
- > DATA EXPLORATION

## UPLOAD DATASET:

DOWNLOAD THE DATASET: <https://www.kaggle.com/datasets/apoorvaappz/global-super-store-dataset>

> OPEN IBM COGNOS DASHBOARD AND CLICK THE UPLOAD DATA AND UPLOAD THE DATASET FILE

The screenshot shows the IBM Cognos Analytics with Watson dashboard. At the top, there is a navigation bar with the IBM Cognos Analytics with Watson logo, a search bar, and user profile icons. Below the navigation bar, the 'Quick launch' section is visible, featuring four main options: 'Upload data', 'Prepare data', 'Exploration', and 'Present data'. The 'Upload data' option is circled in red. Below the 'Quick launch' section, there are tabs for 'Get started' and 'Recent'. The 'Get started' tab is active, showing a section titled 'Get up and running in IBM Cognos Analytics'. This section includes 'How-to videos', an 'Accelerator Catalog', and 'Learning resources'. The 'How-to videos' section includes a link to 'Watch videos'. The 'Accelerator Catalog' section includes a link to 'Browse catalog'. The 'Learning resources' section includes a link to 'Launch the learn pane'.

IBM Cognos Analytics with Watson

Quick launch

**Upload data**  
Upload or drag and drop spreadsheets, csv files, and other data sources.

**Prepare data**  
Use data modules to clean and connect data from multiple resources.

**Exploration**  
Quickly find unbiased answers by identifying trends in your data with data exploration.

**Present data**  
Create sophisticated, multi-page, multi-query dashboards, reports, or stories.

Get started Recent

Get up and running in IBM Cognos Analytics






**How-to videos**  
Learn how to use IBM Cognos Analytics and start gaining insights into your data.  
[Watch videos](#)


**Accelerator Catalog**  
Browse a growing catalog of industry use, best practice guides, custom visualizations, and more.  
[Browse catalog](#)

**Learning resources**  
Expand your knowledge and get assistance by connecting with the community, reading documentation, and watching videos.  
[Launch the learn pane](#)

## DATA PREPARATION:


### STEP 1 : CLICK THE PREPARE DATA

 IBM Cognos Analytics with Watson 30  Search content   




#### Upload data

Upload or drag and drop spreadsheets, csv files, and other data sources.




#### Prepare data

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#### Exploration

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Get started


Recent

### Get up and running in IBM Cognos Analytics

#### How-to videos


Learn how to use IBM Cognos Analytics and start gaining insights into your data.

[Watch videos](#)



#### Accelerator Catalog

Browse a growing catalog of industry use, best practice guides, custom visualizations, and more.

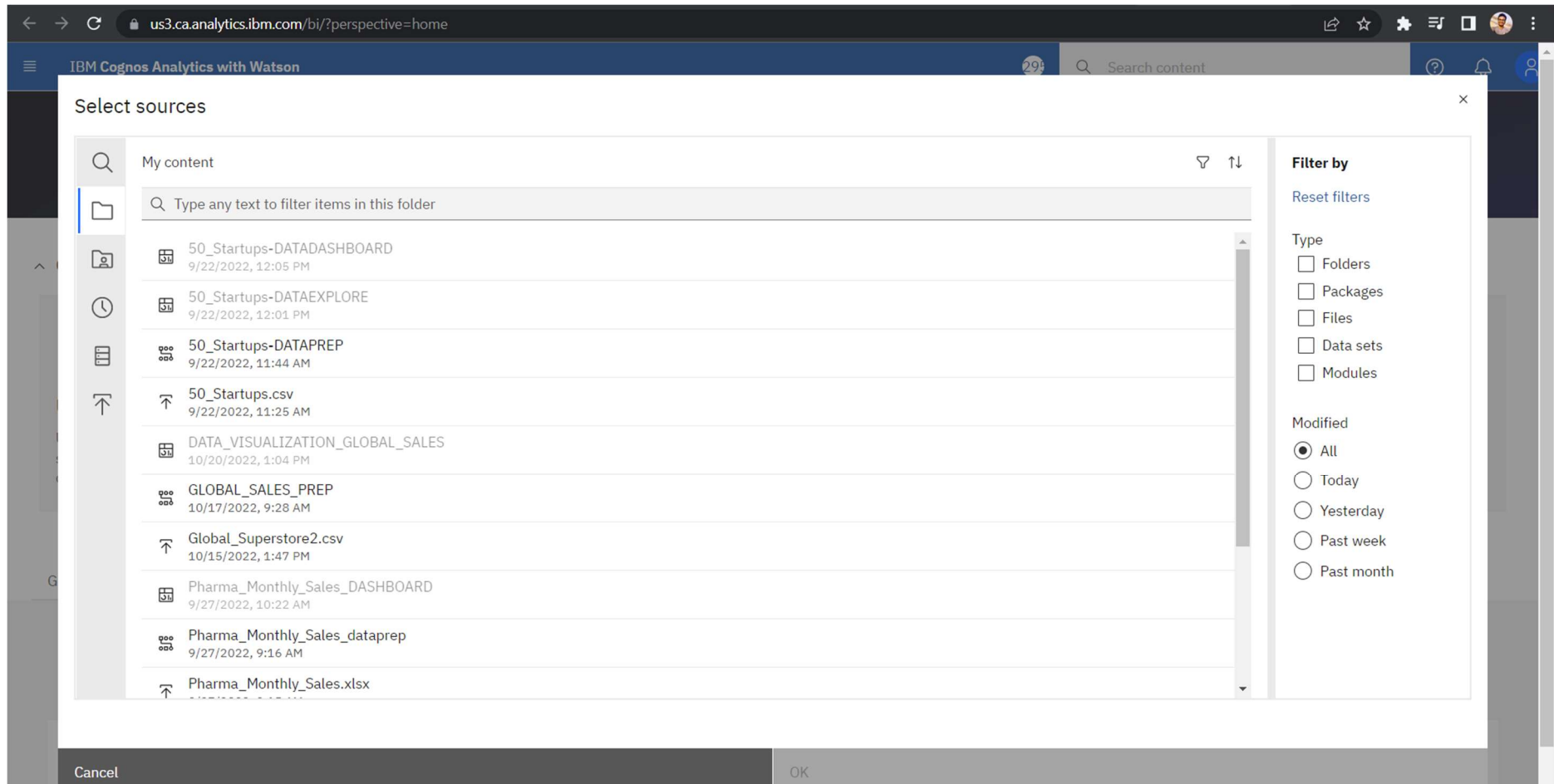
[Browse catalog](#) 

#### Learning resources

Expand your knowledge and get assistance by connecting with the community, reading documentation, and watching videos.

[Launch the learn pane](#)

## STEP 2: SELECT THE UPLOAD DATASET FROM THE CONTENT MENU



### STEP 3 : PREPARATION OF THE DATA

The screenshot displays the IBM Cognos Analytics with Watson interface. The top navigation bar includes the IBM logo, the text "IBM Cognos Analytics with Watson", a dropdown menu for "New data module", a search bar, and user profile icons. Below the navigation bar, a toolbar contains icons for file operations. The main workspace is divided into a left sidebar and a central area. The sidebar, titled "Data module", contains a search bar and a list of items under "New data module": "Navigation paths" and "Global\_Superstore2.csv". The "Global\_Superstore2.csv" item is expanded, showing a list of columns: "# Row Id", "# Row ID", "abc Order ID", "abc Order Date", "abc Ship Date", "abc Ship Mode", "abc Customer ID", "abc Customer Name", "abc Segment", "abc City", "abc State", "abc Country", "abc Postal Code", "abc Market", "abc Region", "abc Product ID", and "abc Category". The central area has three tabs: "Grid", "Relationships", and "Custom tables". The "Grid" tab is active, showing a large icon of a calendar with a checkmark and the text "Preview data". Below the icon, it says "To preview data, select a table, a column in a table, or a folder that contains columns."

IBM Cognos Analytics with Watson

\* New data module

Search content

Properties

Data module

Search

New data module

- Navigation paths
- Global\_Superstore2.csv
  - # Row Id
  - # Row ID
  - abc Order ID
  - abc Order Date
  - abc Ship Date
  - abc Ship Mode
  - abc Customer ID
  - abc Customer Name
  - abc Segment
  - abc City
  - abc State
  - abc Country
  - abc Postal Code
  - abc Market
  - abc Region
  - abc Product ID
  - abc Category

Grid Relationships Custom tables

Preview data

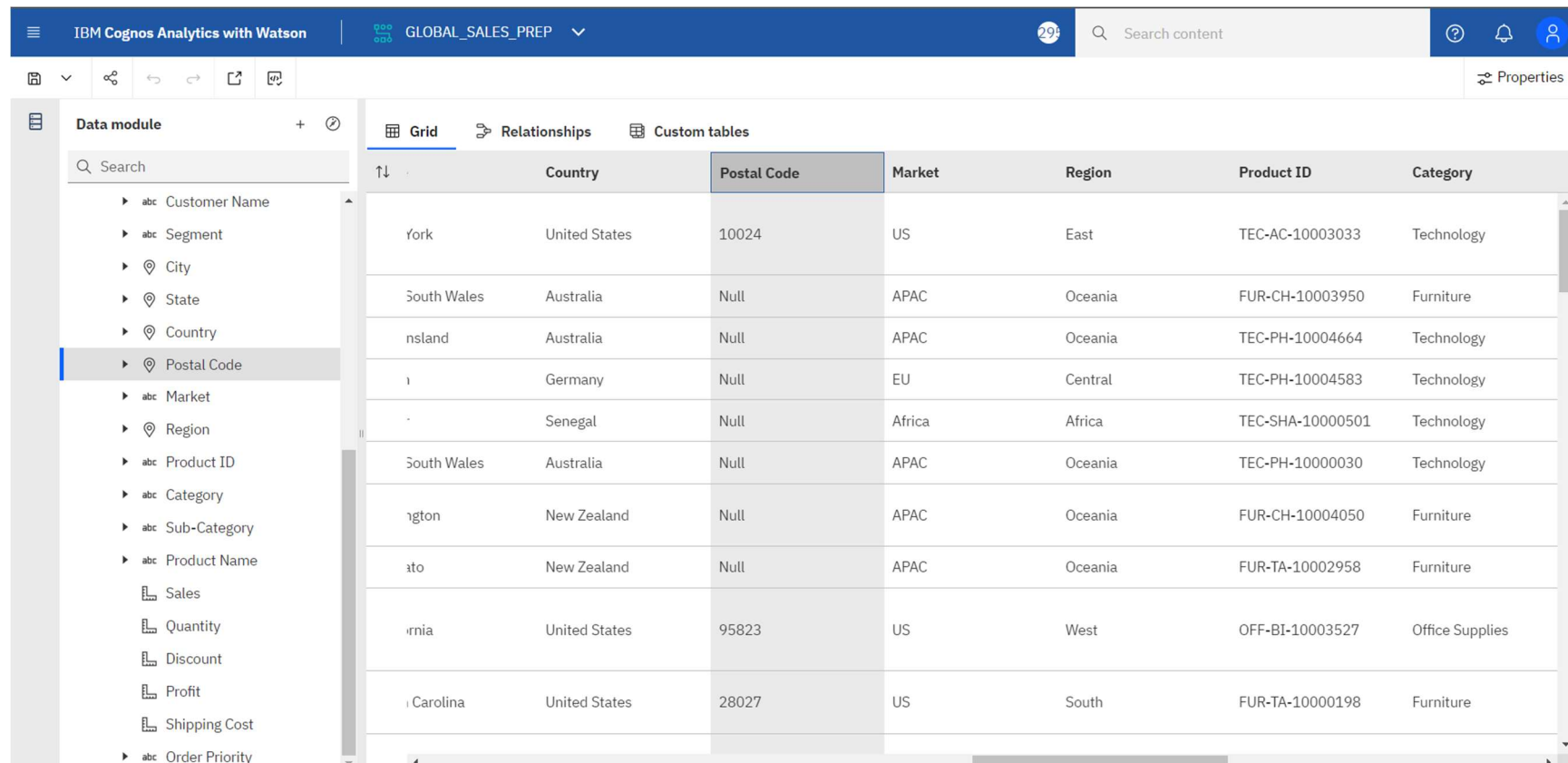
To preview data, select a table, a column in a table, or a folder that contains columns.

STEP 4: ONCE YOU LOAD THE DATA, WE NEED TO PREPARE THE DATA.

A. REMOVE THE NULL VALUES

B. PREPARE CALCULATIONS OF YEAR, MONTH, DAY FIELDS AND ALSO THE RELATED NAVIGATION PATH

C. CREATE A FEW MORE CALCULATIONS – TARGET SALES, MIN SALES, MAX SALES, MIDDLE RANGE SALES



IBM Cognos Analytics with Watson | GLOBAL\_SALES\_PREP | 29 | Search content | ? | ? | ?

Properties

Data module

Grid Relationships Custom tables

	Country	Postal Code	Market	Region	Product ID	Category
York	United States	10024	US	East	TEC-AC-10003033	Technology
South Wales	Australia	Null	APAC	Oceania	FUR-CH-10003950	Furniture
nsland	Australia	Null	APAC	Oceania	TEC-PH-10004664	Technology
	Germany	Null	EU	Central	TEC-PH-10004583	Technology
	Senegal	Null	Africa	Africa	TEC-SHA-10000501	Technology
South Wales	Australia	Null	APAC	Oceania	TEC-PH-10000030	Technology
ngton	New Zealand	Null	APAC	Oceania	FUR-CH-10004050	Furniture
ato	New Zealand	Null	APAC	Oceania	FUR-TA-10002958	Furniture
ernia	United States	95823	US	West	OFF-BI-10003527	Office Supplies
Carolina	United States	28027	US	South	FUR-TA-10000198	Furniture

> CREATE CALCULATION TO MAKE THE DATE PREPARED

The screenshot displays the IBM Cognos Analytics with Watson interface. The top navigation bar includes the application name, a dropdown menu for the current workspace (\* global sales data cleaned), a search bar, and user profile icons. The main workspace is divided into three tabs: Grid, Relationships (selected), and Custom tables. On the left, the 'Data module' pane shows a search bar and a list of fields for 'Global\_Superstore2.csv', including Row ID, Order ID, Order Date, Ship Date, Ship Mode, Customer ID, Customer Name, Segment, City, State, Country, Postal Code, Market, Region, and Product ID. The 'Global\_Superstore2.csv' data module is highlighted in the center workspace. A context menu is open over it, with the 'Calculation...' option selected. The right pane shows 'Diagram settings' with options for Cardinality, Focus mode, and Degrees of separation. A vertical toolbar on the far right contains search and navigation icons.

IBM Cognos Analytics with Watson

\* GLOBAL\_SALES\_PREP

29°

Search content

?

🔔

👤

Edit calculation

Name

day

Components

Expression

🔍 Search

Global\_Sup...tore2.csv

# day

# month

# year

# Calcul... name

# Row Id

# Row ID

abc Order ID

🕒 Order Date

🕒 Ship Date

abc Ship Mode

1

day(Order\_Date)

Validation Results

✅

The expression is valid.

Cancel

OK



## STEP 5 : SAVE THE DATASET AFTER PREPARING THE DATA

us3.ca.analytics.ibm.com/bi/?perspective=ca-modeller&id=iB0AF8BAE444C4605AB487916EB3BF3CA&objRef=iB0AF8BAE444C4605AB487916EB3BF3CA&tid=3019265856\_8590f4ddbde1...

IBM Cognos Analytics with Watson

\* GLOBAL\_SALES\_PREP

Search content

Properties

Data module

Search

GLOBAL\_SALES\_PREP

Navigation paths

Global\_Su...tore2.csv

# day

# month

# year

# Calculation name

# Row Id

# Row ID

abc Order ID

Order Date

Ship Date

abc Ship Mode

abc Customer ID

abc Customer Name

abc Segment

City

Save as

Name

GLOBAL\_SALES\_PREP

Selected destination: My content

My content Team content

Name	Type	Last Accessed
50_Startups-DATADASHBOARD	Dashboard	9/22/2022, 12:05 PM
50_Startups-DATAEXPLORE	Exploration	9/22/2022, 12:01 PM
50_Startups-DATAPREP	Data module	9/22/2022, 11:44 AM
50_Startups.csv CSV	Uploaded file	9/22/2022, 11:25 AM
DATA_VISUALIZATION_GLOBAL_SALES	Dashboard	10/20/2022, 1:04 PM
GLOBAL_SALES_PREP	Data module	10/17/2022, 9:28 AM

Cancel Save

Row ID	Order ID
32298	CA-2012-12489
26341	IN-2013-77878
25330	IN-2013-71249
13524	ES-2013-15793
47221	SG-2013-4320
22732	IN-2013-42360
30570	IN-2011-81826
31192	IN-2012-86369
40155	CA-2014-13590
40936	CA-2012-11663

**LINK FOR THE DATA EXPLORATION:**

[https://us3.ca.analytics.ibm.com/bi/?perspective=ca-modeller&pathRef=.my\\_folders%2FGLOBAL SALES PREP&id=iB0AF8BAE444C4605AB487916EB3BF3CA&objRef=iB0AF8BAE444C4605AB487916EB3BF3CA&tid=2818311301\\_106cdc168b8c493f92db250eb684e70d\\_sessionTemp](https://us3.ca.analytics.ibm.com/bi/?perspective=ca-modeller&pathRef=.my_folders%2FGLOBAL%20SALES%20PREP&id=iB0AF8BAE444C4605AB487916EB3BF3CA&objRef=iB0AF8BAE444C4605AB487916EB3BF3CA&tid=2818311301_106cdc168b8c493f92db250eb684e70d_sessionTemp)

## DATA EXPLORATION:

### STEP 1: CLICK THE EXPLORATION

The screenshot displays the IBM Cognos Analytics with Watson web application interface. The browser address bar shows the URL `us3.ca.analytics.ibm.com/bi/?perspective=home`. The top navigation bar includes the product name, a tab indicator showing '1 item open', a notification badge with '294', a search bar labeled 'Search content', and user profile controls. Below the navigation bar, there are two buttons: 'Watch video' and 'Take a product tour'. The main content area features a 'Quick launch' section with four tiles: 'Upload data', 'Prepare data', 'Exploration', and 'Present data'. The 'Exploration' tile, which includes a diamond icon and the text 'Quickly find unbiased answers by identifying trends in your data with data exploration.', is circled in red. At the bottom, there are tabs for 'Get started' and 'Recent', and a footer area with a time display of '07:11'.

us3.ca.analytics.ibm.com/bi/?perspective=home

IBM Cognos Analytics with Watson | 1 item open | 294 | Search content

Watch video | Take a product tour

Quick launch

- Upload data**  
Upload or drag and drop spreadsheets, csv files, and other data sources.
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- Present data**  
Create sophisticated, multi-page, multi-query dashboards, reports, or stories.

Get started | Recent

07:11

## STEP 2 : ADD A DATA SOURCE TO EXPLORE

The screenshot shows the IBM Cognos Analytics with Watson interface. A modal dialog titled "Add a data source to explore" is open, displaying a list of data sources under the "My content" tab. The dialog has a search bar and filters at the top right. The list contains eight items, each with a name, type, and last accessed date. The items are: 50\_Startups-DATAPREP (Data module), 50\_Startups.csv (Uploaded file), GLOBAL\_SALES\_PREP (Data module), Global\_Superstore2.csv (Uploaded file), Pharma\_Monthly\_Sales\_dataprep (Data module), Pharma\_Monthly\_Sales.xlsx (Uploaded file), Sample - Superstore.xls (Uploaded file), and samplestore\_dataprep (Data module). The dialog has "Cancel" and "Add" buttons at the bottom.

IBM Cognos Analytics with Watson | 1 item open | Search content

Watch video

Quick launch

Upload data

Upload or drag and drop spreadsheets, csv files, and other data sources.

Get started | Recent

Add a data source to explore

My content | Team content

Name	Type	Last Accessed
50_Startups-DATAPREP	Data module	9/22/2022, 11:44 AM
50_Startups.csv CSV	Uploaded file	9/22/2022, 11:25 AM
GLOBAL_SALES_PREP	Data module	11/12/2022, 7:38 PM
Global_Superstore2.csv CSV	Uploaded file	10/15/2022, 1:47 PM
Pharma_Monthly_Sales_dataprep	Data module	9/27/2022, 9:16 AM
Pharma_Monthly_Sales.xlsx xlsx	Uploaded file	9/27/2022, 9:15 AM
Sample - Superstore.xls xls	Uploaded file	9/19/2022, 11:37 AM
samplestore_dataprep	Data module	9/19/2022, 11:50 AM

Cancel | Add

### STEP 3 : SELECT THE NEEDED METRIC TO BE EXPLORED

The screenshot displays the IBM Cognos Analytics with Watson web application. The browser address bar shows the URL: `us3.ca.analytics.ibm.com/bi/?perspective=explore&id=explore_694abcd8-766b-4bf1-b750-fa6e0a0952e5&options%5BdisableGlassPrefetch%5D=true&options%5Bcollections%5D%5Bca...`. The application header includes the logo, a navigation menu, a 'New exploration' button, a user profile icon, and a search bar labeled 'Search content'. Below the header, a toolbar contains icons for chat, save, share, undo, redo, and a 'Create' button. The left sidebar, titled 'Cards', shows a 'Data relationships' card with a diagram of five interconnected nodes and three empty rectangular boxes to its right. The main content area is titled 'Select a starting point' and includes a 'Skip' button in the top right corner. The text 'Every exploration includes a data relationships card.' is displayed. Below this, a message states 'Start with any column. You can always change it later.' followed by a search input field containing the placeholder text 'Enter data column. Not sure? Try Profit, Quantity'. At the bottom, a section titled 'Try starting with one of these...' features five buttons: 'Profit', 'Quantity', 'Discount', 'Sales', and 'Shipping Cost'. The bottom status bar shows the time '07:14'.

## STEP 4 : EXPLORE THE DATA RELATIONSHIPS

IBM Cognos Analytics with Watson | \*samplestore ... ep\_dataexplore | 29%

Search content

Icons: Chat, Save, Share, Undo, Redo, Create +

**Cards**

Sales by Region...ales by Region

Average: 574,300

1

Data relationships

Explore data relationships

samplestore\_dataprep

Reset to original

Search: Sales

Edit diagram

Relationship diagram

10% 100%

Select a visualization

Explore visualizations related to 'Sales'

Sales

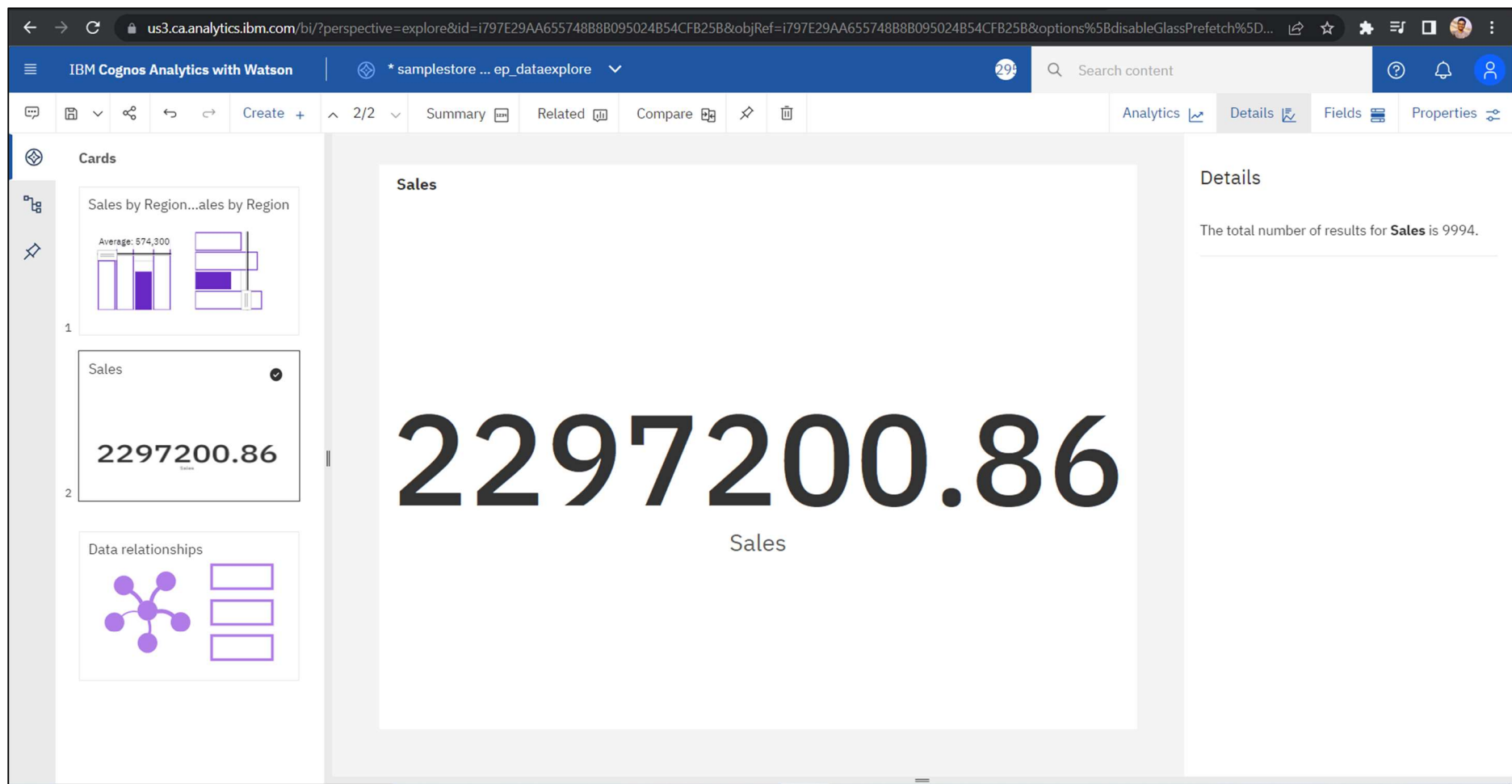
Add +

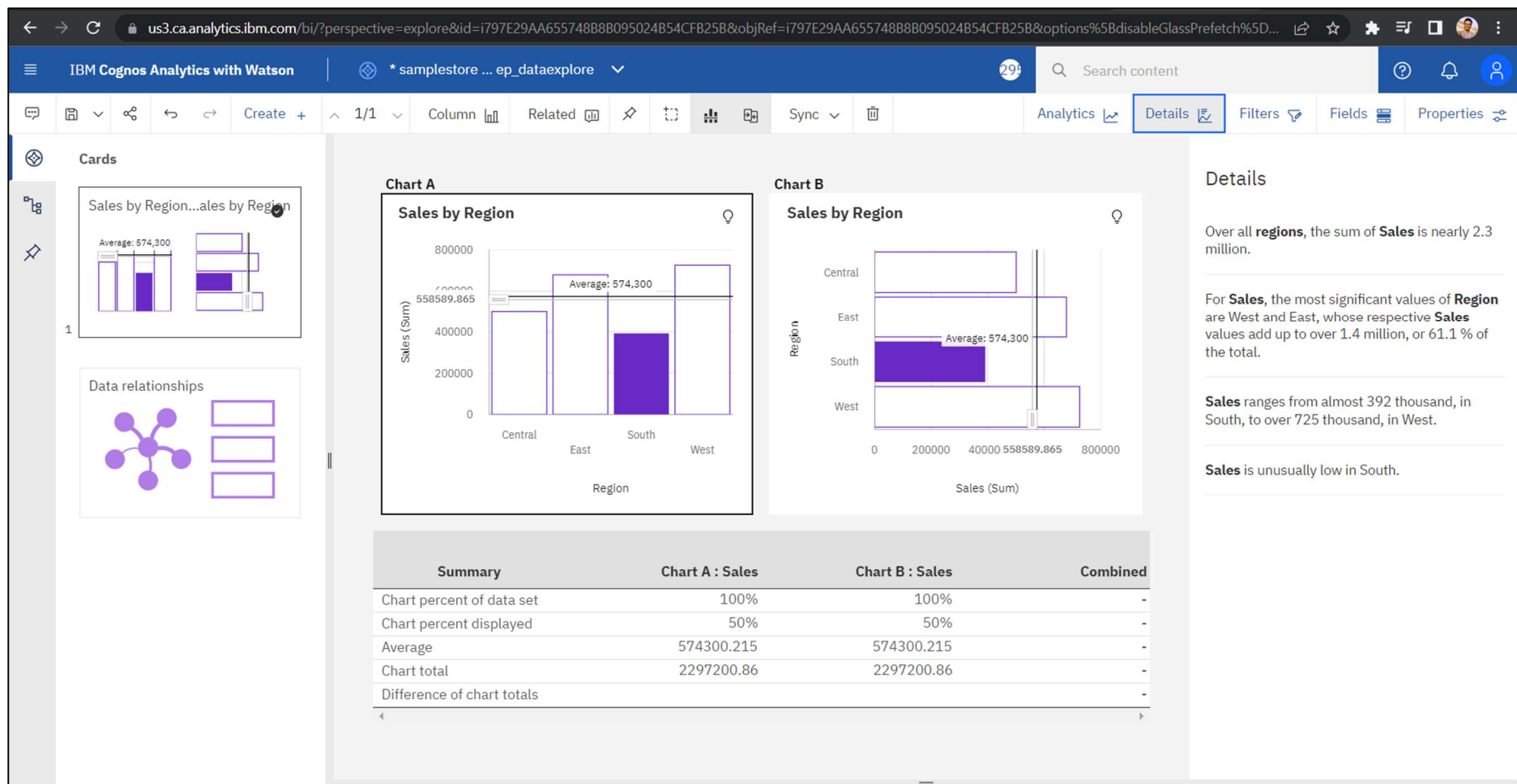
Sales

Add +

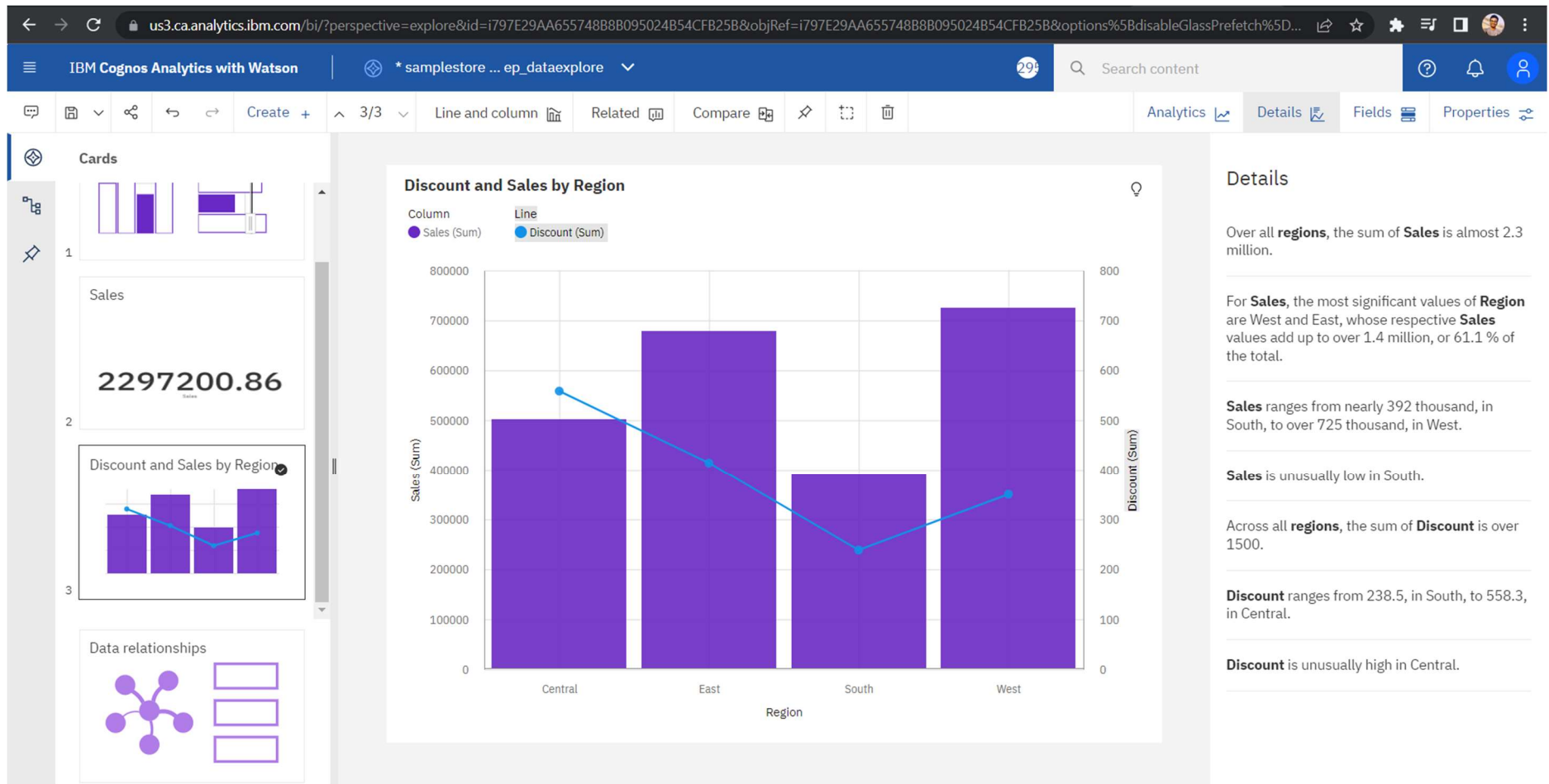
Profit and Sales for State regions

The screenshot displays the IBM Cognos Analytics interface. The top navigation bar includes the IBM Cognos Analytics with Watson logo, a breadcrumb trail for 'samplestore ... ep\_dataexplore', a 29% progress indicator, and a search bar. Below the navigation bar is a toolbar with icons for chat, save, share, undo, redo, and a 'Create +' button. The main content area is divided into three sections. On the left, the 'Cards' section shows two cards: 'Sales by Region...ales by Region' with a bar chart and an average value of 574,300, and 'Data relationships' with a network diagram icon. The central section, titled 'Explore data relationships', shows a network diagram for the 'Sales' entity. The diagram has 'Sales' at the center, with lines connecting it to 'Category', 'Sub-Category', 'Quantity', 'Discount', and 'Profit'. At the bottom of this section is a 'Relationship diagram' label and a zoom slider from 10% to 100%. On the right, the 'Select a visualization' section lists related visualizations: 'Sales', 'Sales', and 'Profit and Sales for State regions', each with an 'Add +' button. A small world map icon is at the bottom right of this section.









us3.ca.analytics.ibm.com/bi/?perspective=explore&id=i797E29AA655748B8B095024B54CFB25B&objRef=i797E29AA655748B8B095024B54CFB25B&options%5BdisableGlassPrefetch%5D...

IBM Cognos Analytics with Watson | \*samplestore ... ep\_dataexplore | 295 | Search content

Analytics | Details | Fields | Properties

Cards

3

Sales

4

Sales

5

Sales

Data relationships

Sales

Tree sunburst | Tree diagram | Rules

Nodes

All

Profit

< 0.3906

[0.3906, 1...

[13.49, 41...

≥ 41.04

Furnishing...

Storage, P...

Bookcase...

Machines

Labels, Fu...

Bookcase...

Labels, Fu...

Storage, P...

Qua...

Binders, A...

Storage, P...

State

Kentucky, ...

Florida, N...

Bookcase...

Qua...

Supplies, ...

Qua...

Details

Sub-Category, Profit, Quantity, and State predict Sales with a strength of 52.2%.

## STEP 5 :SAVE THE EXPLORATION

The screenshot displays the IBM Cognos Analytics with Watson interface. The top navigation bar includes the application name, a breadcrumb trail for the current exploration, a search bar, and user profile icons. The main workspace is divided into three panes: a left-hand 'Data module' pane, a central 'Relationships' pane, and a right-hand 'Diagram settings' pane.

**Data module pane:** This pane contains a search bar and a list of data modules. The module 'Global\_Superstore2.csv' is selected and expanded, revealing a hierarchical list of fields: '# Row Id', 'abc Order ID', 'Order Date', 'Ship Date', 'abc Ship Mode', 'abc Customer ID', 'abc Customer Name', 'abc Segment', 'City', 'State', 'Country', 'Postal Code', 'abc Market', 'Region', and 'Product ID'. The 'Product ID' field is further expanded to show three specific values: 'FUR-ADV...000002', 'FUR-ADV...000108', and 'FUR-ADV...000183'.

**Relationships pane:** This pane shows the 'Global\_Superstore2.csv' module as a single node in a diagram. A context menu is open over this node, offering several actions: 'New' (with sub-options 'Calculation...', 'Filter...', and 'Table...'), 'Rename', 'Show query information...', 'Hide from users', 'Remove', 'Manage filters', 'Auto-arrange', and 'Properties'.

**Diagram settings pane:** This pane contains settings for the diagram. It includes a 'Cardinality' toggle (currently off), a 'Focus mode' toggle (currently off), and a 'Degrees of separation' slider set to 1.

**LINK FOR THE DATA EXPLORATION:**

[https://us3.ca.analytics.ibm.com/bi/?perspective=explore&pathRef=.my\\_folders%2Fsamplestore\\_dataprep\\_dataexplore&subView=model000001846eb0ab0d\\_00000004](https://us3.ca.analytics.ibm.com/bi/?perspective=explore&pathRef=.my_folders%2Fsamplestore_dataprep_dataexplore&subView=model000001846eb0ab0d_00000004)