

Project Development Phase

Delivery of Sprint-2

Team ID	PNT2022TMID08062
Project Title	Data Analytics- Retail Store Stock Inventory Analytics

Project Development Phase:

- Data Collection
- Data Preparation
- Data Exploration
- Dashboard Creation

Sprint-1

Data Collection

Download the Dataset

Dataset link

<https://drive.google.com/file/d/1UPGIbJycH8H7BGjStHq>

[CGGvfrLDjkDk/view?usp=share_link](https://drive.google.com/file/d/1UPGIbJycH8H7BGjStHqCGGvfrLDjkDk/view?usp=share_link)

Sprint-2

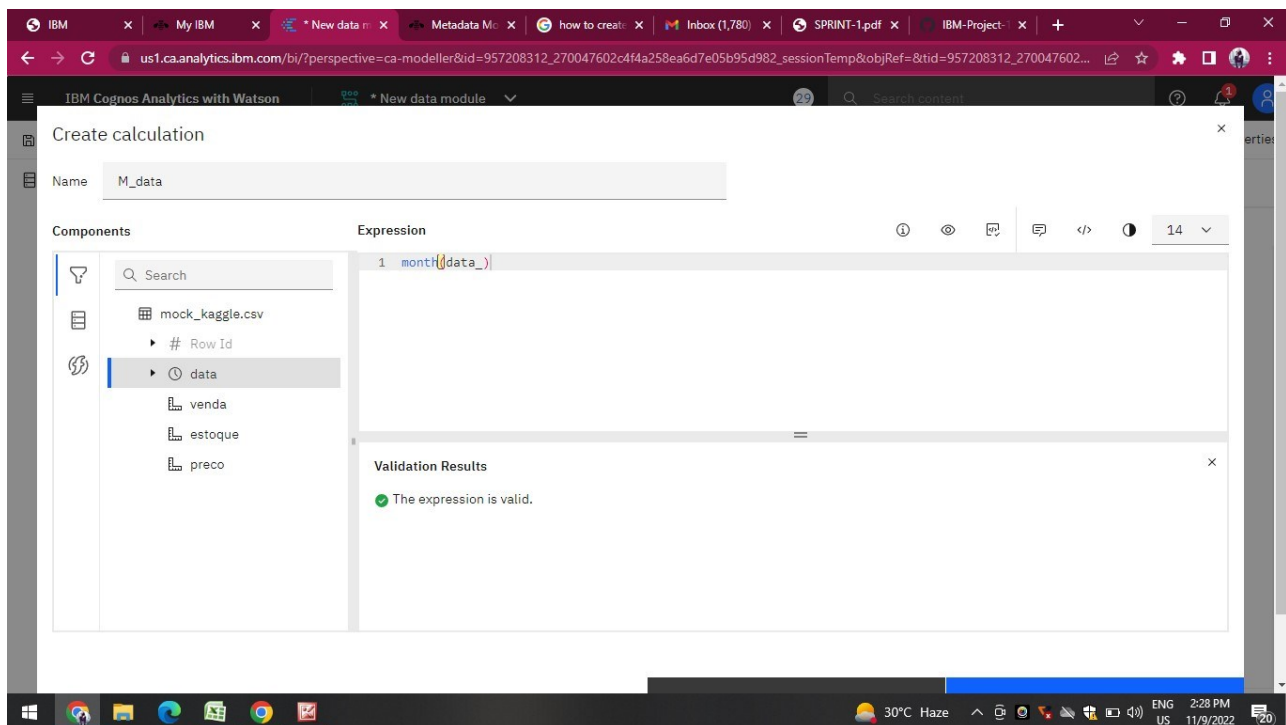
Prepared Data Link :

https://us1.ca.analytics.ibm.com/bi/?perspective=ca-modeller&pathRef=.my_folders%2Finventory%2Bmanagement%2Fretail

Load the Dataset

Tool used – IBM Cognos Analytics

Month data



The screenshot displays the IBM Cognos Analytics web interface. The main area shows a data module named 'M_data' with a grid view of 17 rows of data. The columns are: Row Id, data, venda, estoque, and preco. The right sidebar shows the properties for the selected table, including Usage (Attribute), Aggregate (Count Distinct), Data type (Integer), and Represents (Time).

Row Id	data	venda	estoque	preco
1	2014-01-01	0	4972	1.29
2	2014-01-02	70	4902	1.29
3	2014-01-03	59	4843	1.29
4	2014-01-04	93	4750	1.29
5	2014-01-05	96	4654	1.29
6	2014-01-06	145	4509	1.29
7	2014-01-07	179	4329	1.29
8	2014-01-08	321	4104	1.29
9	2014-01-09	125	4459	1.09
10	2014-01-10	88	5043	1.09
11	2014-01-11	188	5239	1.09
12	2014-01-12	121	5118	1.09
13	2014-01-13	134	4984	1.09
14	2014-01-14	80	4904	1.09
15	2014-01-15	82	4822	1.09
16	2014-01-16	94	4728	1.19
17	2014-01-18	159	4464	1.19

Revenue data

IBM Cognos Analytics with Watson

us1.ca.analytics.ibm.com/bi/?perspective=ca-modeller&id=2878668387_13bd3974af8436c8bf2859ce1fee1c7_sessionTemp&objRef=&tid=2878668387_13bd...

Data module

Grid Relationships Custom tables

Search

New data module

Navigation paths

mock_kaggle.csv

M_data

Row Id

revenue

data

venda

estoque

preco

M_data	Row Id	revenue	data	venda	estoque
1	1	0	2014-01-01	0	4972
1	2	90.3	2014-01-02	70	4902
1	3	76.11	2014-01-03	59	4843
1	4	119.97	2014-01-04	93	4750
1	5	123.84	2014-01-05	96	4654
1	6	187.05	2014-01-06	145	4509
1	7	230.91	2014-01-07	179	4329
1	8	414.09	2014-01-08	321	4104
1	9	136.25	2014-01-09	125	4459
1	10	95.92	2014-01-10	88	5043
1	11	204.92	2014-01-11	188	5239
1	12	131.89	2014-01-12	121	5118
1	13	146.06	2014-01-13	134	4984
1	14	87.2	2014-01-14	80	4904
1	15	89.38	2014-01-15	82	4822
1	16	111.86	2014-01-16	94	4728
1	17	189.21	2014-01-18	159	4464

Properties

General

Label: revenue

Hide from users: ☐

Expression: [View or edit](#)

Usage: Measure

Aggregate: Total

Data type: Decimal

Represents: [Default](#)

Lookup reference: None

Description: [Add description](#)

Comments: [Add comments](#)

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Year data

IBM Cognos Analytics with Watson

us1.ca.analytics.ibm.com/bi/?perspective=ca-modeller&id=iC0649AD76B1B437891ABFCC0EE28A1A&objRef=iC0649AD76B1B437891ABFCC0EE28A1A&tid=...

Data module

Grid Relationships Custom tables

Search

link

Navigation paths

mock_kaggle.csv

M_data

Row Id

revenue

year

venda

estoque

preco

M_data	Row Id	revenue	year	venda	estoque
1	1	0	2014-01-01	0	4972
1	2	90.3	2014-01-02	70	4902
1	3	76.11	2014-01-03	59	4843
1	4	119.97	2014-01-04	93	4750
1	5	123.84	2014-01-05	96	4654
1	6	187.05	2014-01-06	145	4509
1	7	230.91	2014-01-07	179	4329
1	8	414.09	2014-01-08	321	4104
1	9	136.25	2014-01-09	125	4459
1	10	95.92	2014-01-10	88	5043
1	11	204.92	2014-01-11	188	5239
1	12	131.89	2014-01-12	121	5118
1	13	146.06	2014-01-13	134	4984
1	14	87.2	2014-01-14	80	4904
1	15	89.38	2014-01-15	82	4822
1	16	111.86	2014-01-16	94	4728
1	17	189.21	2014-01-18	159	4464

Properties

General Navigation paths

Label: year

Hide from users: ☐

Expression: [View or edit](#)

Usage: Attribute

Aggregate: Count Distinct

Data type: Date

Represents: Time

Year: [Year](#)

Lookup reference: None

Description: [Add description](#)

Comments: [Add comments](#)

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Stock data

IBM Cognos Analytics with Watson

us1.ca.analytics.ibm.com/bi/?perspective=ca-modeller&id=iC0649AD76B1B437891ABFCC0EE28A1A&objRef=iC0649AD76B1B437891ABFCC0EE28A1A&tid...

Grid Relationships Custom tables

Data module

- link
- Navigation paths
- mock_kaggle.csv
- M_data
- Row Id
- revenue
- year
- sales
- estoque
- preco

M_data	Row Id	revenue	year	sales	estoque
1	1	0	2014-01-01	0	4972
1	2	90.3	2014-01-02	70	4902
1	3	76.11	2014-01-03	59	4843
1	4	119.97	2014-01-04	93	4750
1	5	123.84	2014-01-05	96	4654
1	6	187.05	2014-01-06	145	4509
1	7	230.91	2014-01-07	179	4329
1	8	414.09	2014-01-08	321	4104
1	9	136.25	2014-01-09	125	4459
1	10	95.92	2014-01-10	88	5043
1	11	204.92	2014-01-11	188	5239
1	12	131.89	2014-01-12	121	5118
1	13	146.06	2014-01-13	134	4984
1	14	87.2	2014-01-14	80	4904
1	15	89.38	2014-01-15	82	4822
1	16	111.86	2014-01-16	94	4728
1	17	189.21	2014-01-18	159	4464

Properties

General

Label: sales

Hide from users: ☐

Expression: [View or edit](#)

Usage: Measure

Aggregate: Total

Data type: Integer

Represents:

Default:

Lookup reference: None

Description:

Comments:

Sales data

IBM Cognos Analytics with Watson

us1.ca.analytics.ibm.com/bi/?perspective=ca-modeller&id=iC0649AD76B1B437891ABFCC0EE28A1A&objRef=iC0649AD76B1B437891ABFCC0EE28A1A&tid...

Grid Relationships Custom tables

Data module

- link
- Navigation paths
- mock_kaggle.csv
- M_data
- Row Id
- revenue
- year
- sales
- stock
- preco

M_data	Row Id	revenue	year	sales	stock
1	1	0	2014-01-01	0	4972
1	2	90.3	2014-01-02	70	4902
1	3	76.11	2014-01-03	59	4843
1	4	119.97	2014-01-04	93	4750
1	5	123.84	2014-01-05	96	4654
1	6	187.05	2014-01-06	145	4509
1	7	230.91	2014-01-07	179	4329
1	8	414.09	2014-01-08	321	4104
1	9	136.25	2014-01-09	125	4459
1	10	95.92	2014-01-10	88	5043
1	11	204.92	2014-01-11	188	5239
1	12	131.89	2014-01-12	121	5118
1	13	146.06	2014-01-13	134	4984
1	14	87.2	2014-01-14	80	4904
1	15	89.38	2014-01-15	82	4822
1	16	111.86	2014-01-16	94	4728
1	17	189.21	2014-01-18	159	4464

Properties

General

Label: stock

Hide from users: ☐

Expression: [View or edit](#)

Usage: Measure

Aggregate: Total

Data type: Integer

Represents:

Default:

Lookup reference: None

Description:

Comments:

Price data

IBM Cognos Analytics with Watson

Search content

link

Navigation paths

mock_kaggle.csv

M_data

Row Id

revenue

year

sales

stock

price

Row Id	revenue	year	sales	stock	price
1	0	2014-01-01	0	4972	1.29
2	90.3	2014-01-02	70	4902	1.29
3	76.11	2014-01-03	59	4843	1.29
4	119.97	2014-01-04	93	4750	1.29
5	123.84	2014-01-05	96	4654	1.29
6	187.05	2014-01-06	146	4509	1.29
7	230.91	2014-01-07	179	4329	1.29
8	414.09	2014-01-08	321	4104	1.29
9	136.25	2014-01-09	125	4459	1.09
10	95.92	2014-01-10	88	5043	1.09
11	204.92	2014-01-11	188	5239	1.09
12	131.89	2014-01-12	121	5118	1.09
13	146.06	2014-01-13	134	4984	1.09
14	87.2	2014-01-14	80	4904	1.09
15	89.38	2014-01-15	82	4822	1.09
16	111.86	2014-01-16	94	4728	1.19
17	189.21	2014-01-18	159	4464	1.19

General

Label

price

Hide from users

Expression

View or edit

Usage

Measure

Aggregate

Total

Data type

Decimal

Represents

Default

Lookup reference

None

Description

Comments

Month-Format Date

IBM Cognos Analytics with Watson

us1.ca.analytics.ibm.com/bi/?perspective=ca-modeller&id=ic0649AD76B1B437891ABFCC0EE28A1A&objRef=ic0649AD76B1B437891ABFCC0EE28A1A&tid...

Data module

Grid

Properties

Data format

Column: M_data

Format type: Date

Date separator: /

Date style: Short

Date ordering: Default

Missing value characters: <empty>

Advanced options

Reset properties

Cancel

OK

Row Id	revenue	year	sales	stock	
1	16	111.86	2014-01-16	94	4728
1	17	189.21	2014-01-18	159	4464

Properties

General

Navigation paths

Label: M_data

Hide from users: ☐

Expression: [View or edit](#)

Usage: Attribute

Aggregate: Count Distinct

Data type: Integer

Represents: Time

Month:

Description:

Comments:

Screen tip:

IBM Cognos Analytics with Watson

us1.ca.analytics.ibm.com/bi/?perspective=ca-modeller&id=ic0649AD76B1B437891ABFCC0EE28A1A&objRef=ic0649AD76B1B437891ABFCC0EE28A1A&tid...

Data module

Grid

Relationships

Custom tables

Properties

Row Id	revenue	year	sales	stock	
1	1	0	1/1/14	0	4972
1	2	90	1/2/14	70	4902
1	3	76	1/3/14	59	4843
1	4	120	1/4/14	93	4750
1	5	124	1/5/14	96	4654
1	6	187	1/6/14	145	4509
1	7	231	1/7/14	179	4329
1	8	414	1/8/14	321	4104
1	9	136	1/9/14	125	4459
1	10	96	1/10/14	88	5043
1	11	205	1/11/14	188	5239
1	12	132	1/12/14	121	5118
1	13	146	1/13/14	134	4984
1	14	87	1/14/14	80	4904
1	15	89	1/15/14	82	4822
1	16	112	1/16/14	94	4728
1	17	189	1/18/14	159	4464

Properties

General

Navigation paths

Label: M_data

Hide from users: ☐

Expression: [View or edit](#)

Usage: Attribute

Aggregate: Count Distinct

Data type: Integer

Represents: Time

Month:

Description:

Comments:

Screen tip:

Revenue-Format Data

The screenshot shows the IBM Cognos Analytics interface. A 'Data format' dialog box is open for the 'revenue' column. The 'Format type' is set to 'Number'. The 'Number of decimal places' is set to '0'. The 'Negative sign symbol' is set to 'Default'. The 'Use thousands separator' is set to 'No'. The 'Negative sign position' is set to 'Default'. The 'Missing value characters' are set to '<empty>'. The 'Advanced options' button is visible. The background shows a data grid with columns: M_data, Row Id, revenue, year, sales, stock, and price.

M_data	Row Id	revenue	year	sales	stock	price
1	1	0	1/1/14	0	4972	
1	2	90	1/2/14	70	4902	
1	3	76	1/3/14	59	4843	
1	4	120	1/4/14	93	4750	
1	5	124	1/5/14	96	4654	
1	6	187	1/6/14	145	4509	
1	7	231	1/7/14	179	4329	
1	8	414	1/8/14	321	4104	
1	9	136	1/9/14	125	4459	
1	10	96	1/10/14	88	5043	
1	11	205	1/11/14	188	5239	
1	12	132	1/12/14	121	5118	
1	13	146	1/13/14	134	4984	
1	14	87	1/14/14	80	4904	
1	15	89	1/15/14	82	4822	
1	16	112	1/16/14	94	4728	
1	17	189	1/18/14	159	4464	

The screenshot shows the IBM Cognos Analytics interface. The 'Data module' grid view is displayed, showing a table with columns: M_data, Row Id, revenue, year, sales, stock, and price. The 'revenue' column is highlighted. The 'Properties' panel on the right shows the 'General' tab for the 'revenue' column, with 'Label' set to 'revenue', 'Hide from users' set to 'Off', 'Expression' set to 'View or edit', 'Usage' set to 'Measure', 'Aggregate' set to 'Total', 'Data type' set to 'Decimal', 'Represents' set to 'Default', 'Lookup reference' set to 'None', and 'Description' set to 'None'. The background shows a data grid with columns: M_data, Row Id, revenue, year, sales, stock, and price.

M_data	Row Id	revenue	year	sales	stock	price
1	1	0	1/1/14	0	4972	
1	2	90	1/2/14	70	4902	
1	3	76	1/3/14	59	4843	
1	4	120	1/4/14	93	4750	
1	5	124	1/5/14	96	4654	
1	6	187	1/6/14	145	4509	
1	7	231	1/7/14	179	4329	
1	8	414	1/8/14	321	4104	
1	9	136	1/9/14	125	4459	
1	10	96	1/10/14	88	5043	
1	11	205	1/11/14	188	5239	
1	12	132	1/12/14	121	5118	
1	13	146	1/13/14	134	4984	
1	14	87	1/14/14	80	4904	
1	15	89	1/15/14	82	4822	
1	16	112	1/16/14	94	4728	
1	17	189	1/18/14	159	4464	

Year-Format Data

The screenshot shows the IBM Cognos Analytics interface. A 'Data format' dialog box is open for the 'year' column. The dialog has the following settings:

- Column: year
- Format type: Date
- Date separator: /
- Date style: Short
- Date ordering: Default
- Missing value characters: <empty>

The background shows a data grid with columns: Row Id, revenue, year, sales, stock, and price. The 'year' column is highlighted in the left sidebar.

Row Id	revenue	year	sales	stock	price
1	0	1/1/14	0	4972	
1	90	1/2/14	70	4902	
1	76	1/3/14	59	4843	
1	120	1/4/14	93	4750	
1	124	1/5/14	96	4654	
1	187	1/6/14	145	4509	
1	231	1/7/14	179	4329	
1	414	1/8/14	321	4104	
1	136	1/9/14	125	4459	
1	96	1/10/14	88	5043	
1	205	1/11/14	188	5239	
1	132	1/12/14	121	5118	
1	146	1/13/14	134	4984	
1	87	1/14/14	80	4904	
1	89	1/15/14	82	4822	
1	112	1/16/14	94	4728	
1	189	1/18/14	159	4464	

The screenshot shows the IBM Cognos Analytics interface. The 'Data module' grid is displayed, showing a table with columns: Row Id, revenue, year, sales, stock, and price. The 'year' column is highlighted in the left sidebar.

Row Id	revenue	year	sales	stock	price
1	0	1/1/14	0	4972	
1	90	1/2/14	70	4902	
1	76	1/3/14	59	4843	
1	120	1/4/14	93	4750	
1	124	1/5/14	96	4654	
1	187	1/6/14	145	4509	
1	231	1/7/14	179	4329	
1	414	1/8/14	321	4104	
1	136	1/9/14	125	4459	
1	96	1/10/14	88	5043	
1	205	1/11/14	188	5239	
1	132	1/12/14	121	5118	
1	146	1/13/14	134	4984	
1	87	1/14/14	80	4904	
1	89	1/15/14	82	4822	
1	112	1/16/14	94	4728	
1	189	1/18/14	159	4464	

Sales-Format Data

The screenshot shows the IBM Cognos Analytics interface. A 'Data format' dialog box is open for the 'sales' column. The dialog has a 'Format type' dropdown set to 'Number'. Below it, there are several options: 'Number of decimal places' (0), 'Negative sign symbol' (Default), 'Use thousands separator' (No), 'Negative sign position' (Default), and 'Missing value characters' (<empty>). There are 'Advanced options' and 'Reset properties' buttons at the bottom of the dialog. The background shows a data grid with columns: T1, M_data, Row Id, revenue, year, sales, and stock. The 'sales' column is highlighted. The right sidebar shows the 'Properties' panel for the 'sales' measure, with fields for Label, Hide from users, Expression, Usage, Aggregate, Data type, Represents, Default, Lookup reference, Description, and Comments.

T1	M_data	Row Id	revenue	year	sales	stock
1	1	1	0	1/1/14	0	4972
1	1	2	90	1/2/14	70	4902
1	1	3	76	1/3/14	59	4843
1	1	4	120	1/4/14	93	4750
1	1	5	124	1/5/14	96	4654
1	1	6	187	1/6/14	145	4609
1	1	7	231	1/7/14	179	4329
1	1	8	414	1/8/14	321	4104
1	1	9	136	1/9/14	125	4459
1	1	10	96	1/10/14	88	5043
1	1	11	205	1/11/14	188	5239
1	1	12	132	1/12/14	121	5118
1	1	13	146	1/13/14	134	4984
1	1	14	87	1/14/14	80	4904
1	1	15	89	1/15/14	82	4822
1	1	16	112	1/16/14	94	4728
1	1	17	189	1/18/14	159	4464

The screenshot shows the IBM Cognos Analytics interface with the 'Data module' grid view. The grid displays data for the 'sales' column. The columns are: T1, M_data, Row Id, revenue, year, sales, and stock. The 'sales' column is highlighted. The right sidebar shows the 'Properties' panel for the 'sales' measure, with fields for Label, Hide from users, Expression, Usage, Aggregate, Data type, Represents, Default, Lookup reference, Description, and Comments.

T1	M_data	Row Id	revenue	year	sales	stock
1	1	1	0	1/1/14	0	4972
1	1	2	90	1/2/14	70	4902
1	1	3	76	1/3/14	59	4843
1	1	4	120	1/4/14	93	4750
1	1	5	124	1/5/14	96	4654
1	1	6	187	1/6/14	145	4609
1	1	7	231	1/7/14	179	4329
1	1	8	414	1/8/14	321	4104
1	1	9	136	1/9/14	125	4459
1	1	10	96	1/10/14	88	5043
1	1	11	205	1/11/14	188	5239
1	1	12	132	1/12/14	121	5118
1	1	13	146	1/13/14	134	4984
1	1	14	87	1/14/14	80	4904
1	1	15	89	1/15/14	82	4822
1	1	16	112	1/16/14	94	4728
1	1	17	189	1/18/14	159	4464

Stock-Format Data

The screenshot shows the IBM Cognos Analytics interface. A 'Data format' dialog box is open for the 'stock' column. The 'Format type' is set to 'Number'. The 'Number of decimal places' is 0. The 'Negative sign symbol' is 'Default'. The 'Use thousands separator' is 'No'. The 'Negative sign position' is 'Default'. The 'Missing value characters' are '<empty>'. The 'Advanced options' button is visible. The background shows a data grid with columns: M_data, Row Id, revenue, year, sales, and stock. The 'stock' column is highlighted.

M_data	Row Id	revenue	year	sales	stock
1	1	0	1/1/14	0	4972
1	2	90	1/2/14	70	4902
1	3	76	1/3/14	59	4843
1	4	120	1/4/14	93	4760
1	5	124	1/5/14	96	4654
1	6	187	1/6/14	145	4509
1	7	231	1/7/14	179	4329
1	8	414	1/8/14	321	4104
1	9	136	1/9/14	125	4459
1	10	96	1/10/14	88	5043
1	11	205	1/11/14	188	5239
1	12	132	1/12/14	121	5118
1	13	146	1/13/14	134	4984
1	14	87	1/14/14	80	4904
1	15	89	1/15/14	82	4822
1	16	212	1/16/14	94	4728
1	17	189	1/18/14	159	4464

The screenshot shows the IBM Cognos Analytics interface. The 'Properties' panel is open for the 'stock' column. The 'Label' is 'stock'. The 'Hide from users' toggle is off. The 'Expression' is 'View or edit >'. The 'Usage' is 'Measure'. The 'Aggregate' is 'Total'. The 'Data type' is 'Integer'. The 'Represents' is 'Default'. The 'Lookup reference' is 'None'. The 'Description' is empty. The 'Comments' are empty. The background shows a data grid with columns: M_data, Row Id, revenue, year, sales, and stock. The 'stock' column is highlighted.

M_data	Row Id	revenue	year	sales	stock
1	1	0	1/1/14	0	4972
1	2	90	1/2/14	70	4902
1	3	76	1/3/14	59	4843
1	4	120	1/4/14	93	4760
1	5	124	1/5/14	96	4654
1	6	187	1/6/14	145	4509
1	7	231	1/7/14	179	4329
1	8	414	1/8/14	321	4104
1	9	136	1/9/14	125	4459
1	10	96	1/10/14	88	5043
1	11	205	1/11/14	188	5239
1	12	132	1/12/14	121	5118
1	13	146	1/13/14	134	4984
1	14	87	1/14/14	80	4904
1	15	89	1/15/14	82	4822
1	16	212	1/16/14	94	4728
1	17	189	1/18/14	159	4464

Price-Format Data

IBM Cognos Analytics with Watson

us1.ca.analytics.ibm.com/bi/?perspective=ca-modeller&id=iC0649AD76B1B437891ABFCC0EE28A1A&objRef=iC0649AD76B1B437891ABFCC0EE28A1A&tid...

Data module

link

Navigation paths

mock_kaggle.csv

M_data

Row Id

revenue

year

sales

stock

price

Grid

Row Id

price

Data format

Column: price

Format type: Number

Number of decimal places: 0

Negative sign symbol: Default

Use thousands separator: No

Negative sign position: Default

Missing value characters: <empty>

Advanced options

Reset properties

Cancel

OK

Properties

General

Label: price

Hide from users: ☐

Expression: View or edit

Usage: Measure

Aggregate: Total

Data type: Decimal

Represents: Default

Lookup reference: None

Description:

Comments:

ENG 3:49 PM US 11/9/2022

IBM Cognos Analytics with Watson

us1.ca.analytics.ibm.com/bi/?perspective=ca-modeller&id=iC0649AD76B1B437891ABFCC0EE28A1A&objRef=iC0649AD76B1B437891ABFCC0EE28A1A&tid...

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sales

stock

price

Relationships

Custom tables

Properties

General

Label: price

Hide from users: ☐

Expression: View or edit

Usage: Measure

Aggregate: Total

Data type: Decimal

Represents: Default

Lookup reference: None

Description:

Comments:

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