

OpenRefine Task Report



Blessy Louis

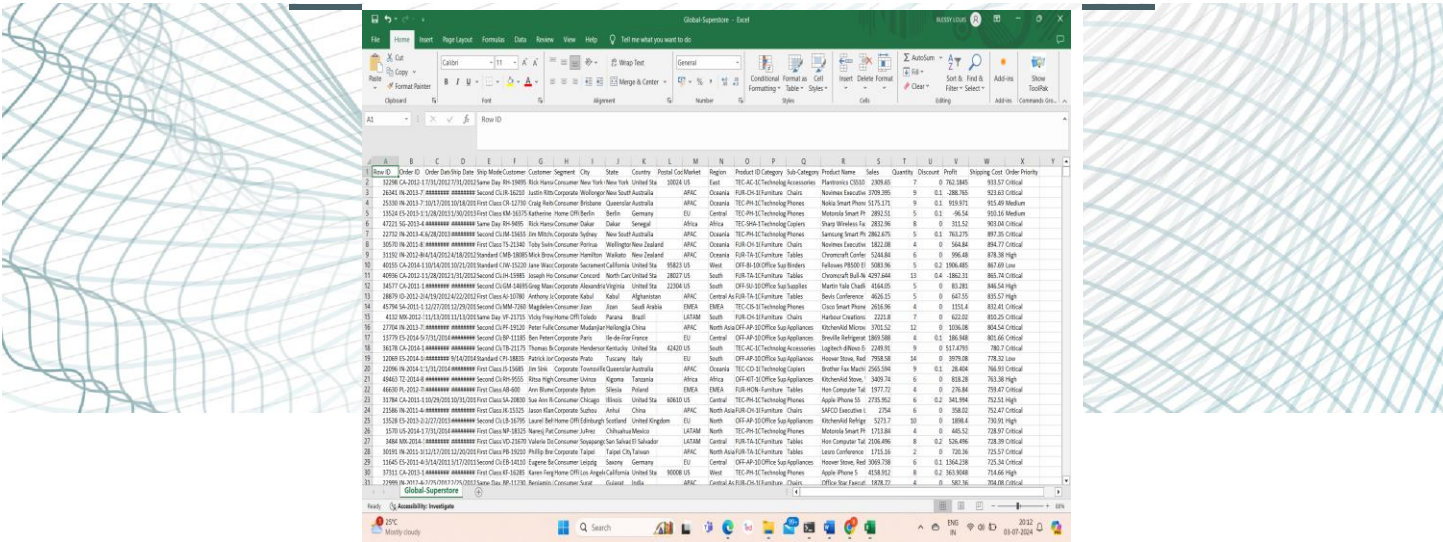
Date

03.07.2024

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INTRODUCTION

OpenRefine is a powerful open-source tool for working with messy data. It allows users to clean, transform, and enrich datasets by providing an intuitive interface for performing a wide variety of data wrangling tasks. OpenRefine supports operations such as data cleaning, clustering, normalization, and transformation. It can handle large datasets and is capable of importing data from various formats, including CSV, Excel, JSON, and XML. With its ability to undo and redo steps, users can experiment with different data cleaning strategies and track changes easily. OpenRefine is particularly useful for data scientists and analysts who need to prepare data for analysis or visualization.

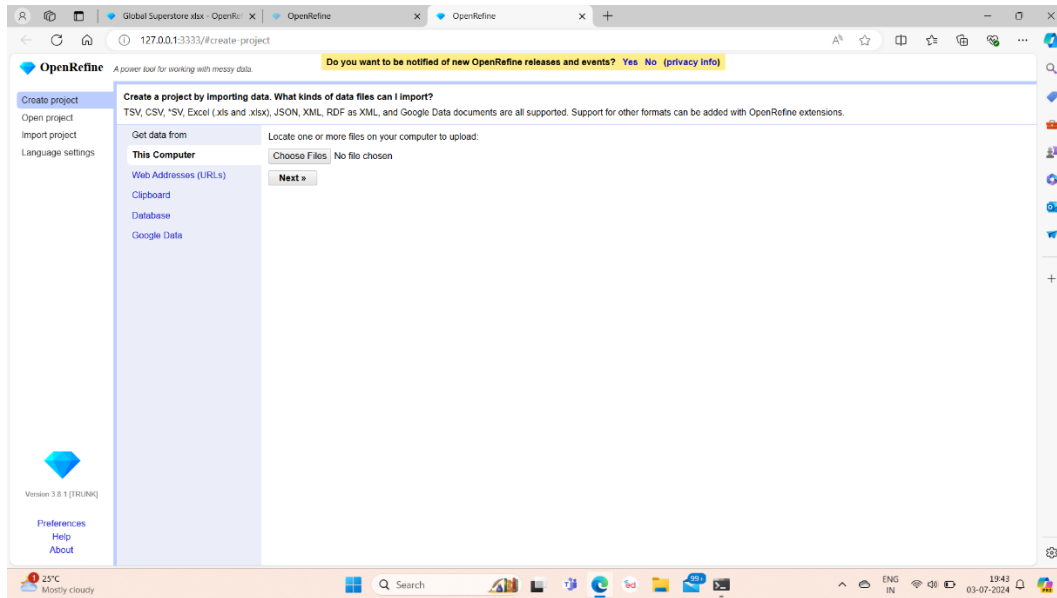


THE DATASET

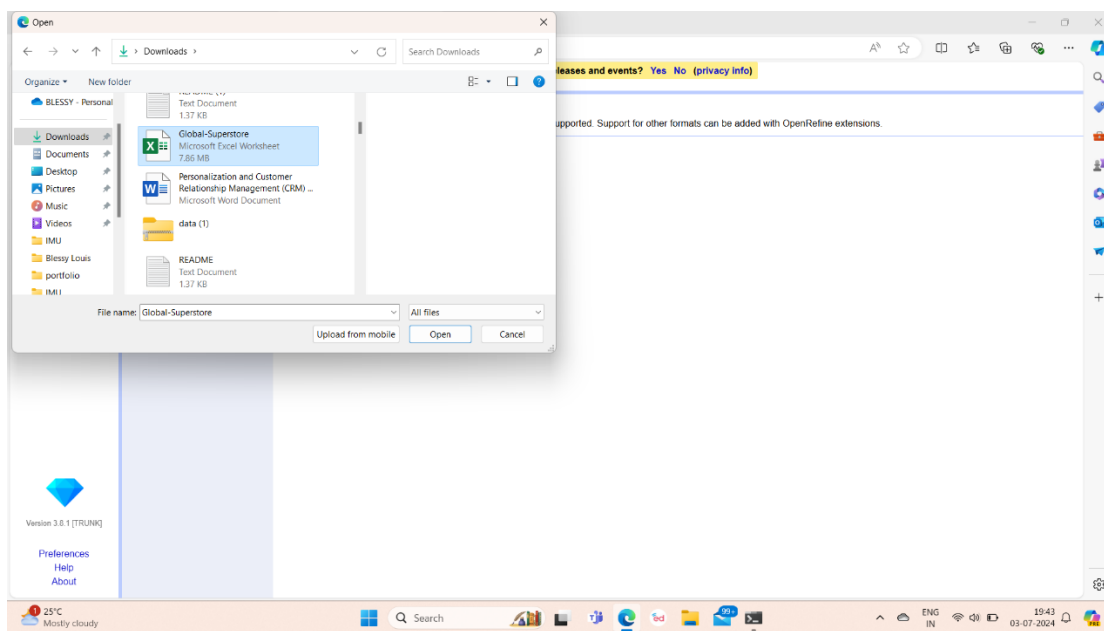
Data Description

This dataset contains detailed transactional information regarding orders, spanning various attributes. Each record is uniquely identified by a Row ID and includes an Order ID to specify individual transactions. The dataset captures the timeline of each order with Order Date and Ship Date, alongside the shipping preferences indicated by the Ship Mode. Customer details are meticulously recorded, including Customer ID, Customer Name, Segment (which likely categorizes the type of customer), City, State, Country, and Postal Code. Additionally, the dataset distinguishes the Market and Region of each transaction. Product details are comprehensive, featuring Product ID, Category, Sub-Category, and Product Name, reflecting a diverse range of items. Financial aspects are captured through fields like Sales, Quantity, Discount, Profit, and Shipping Cost. Finally, the Order Priority field suggests the urgency assigned to each order, potentially influencing the shipping process. This rich dataset is ideal for analyzing sales performance, customer behavior, and logistical efficiency across different geographical and market segments.

Dataset Upload



After the OpenRefine application is installed, we open the application after extracting the zipped file, we encounter an interface like above.



We select the dataset file from the local files

Global Superstore.xlsx - OpenRefine | OpenRefine

127.0.0.1:3333/project?project=2527587983634&ui=%7B%7D%7D

OpenRefine Global Superstore.xlsx

Facet / Filter Undo / Redo 0 / 1

51290 rows

Show as: rows records Show: 5 10 25 50 100 500 1000 rows

Extensions Wikibase

Using facets and filters

Use facets and filters to select subsets of your data to act on. Choose facet and filter methods from the menus at the top of each data column.

Not sure how to get started? Watch these screencasts

	Row ID	Order ID	Order Date	Ship Date	Ship Mode	Customer ID	Customer Name	Segment	City	State	Country	Postal Code	Market	
1.	32296	CA-2012-124891	7/31/2012	7/31/2012	Same Day	RI-19495	Rick Hansen	Consumer	New York City	New York	United States	10024	US	East
2.	26341	IN-2013-77878	2013-05-01T18:30:00Z	2013-07-01T18:30:00Z	Second Class	JR-16210	Justin Ritter	Corporate	Woolongong	New South Wales	Australia		APAC	Oceania
3.	26330	IN-2013-71249	10/17/2013	10/18/2013	First Class	CR-12730	Craig Reiter	Consumer	Brisbane	Queensland	Australia		APAC	Oceania
4.	13524	ES-2013-1579342	1/28/2013	1/30/2013	First Class	KM-16375	Katherine Murray	Home Office	Berlin	Berlin	Germany		EU	Central
5.	47221	SG-2013-4320	2013-05-10T18:30:00Z	2013-05-10T18:30:00Z	Same Day	RH-9495	Rick Hansen	Consumer	Dakar	Dakar	Senegal		Africa	Africa
6.	22732	IN-2013-42360	6/28/2013	2013-01-06T18:30:00Z	Second Class	JM-15655	Jim Michum	Corporate	Sydney	New South Wales	Australia		APAC	Oceania
7.	30570	IN-2011-61805	2011-07-10T18:30:00Z	2011-09-10T18:30:00Z	First Class	TS-21340	Toby Swindell	Consumer	Porirua	Wellington	New Zealand		APAC	Oceania
8.	31192	IN-2012-85369	4/14/2012	4/19/2012	Standard Class	MB-18065	Mick Brown	Consumer	Hamilton	Waikato	New Zealand		APAC	Oceania
9.	40155	CA-2014-135909	10/14/2014	10/21/2014	Standard Class	JW-15220	Jane Waco	Corporate	Sacramento	California	United States	95823	US	West
10.	40936	CA-2012-116638	1/28/2012	1/31/2012	Second Class	JH-15985	Joseph Holt	Consumer	Concord	North Carolina	United States	28027	US	South

23°C Mostly cloudy

Search

ENG IN 19:44 03-07-2024

The dataset is uploaded successfully to the application.

Data Formatting

The screenshot shows the OpenRefine Global Superstore.xlsx project with 51290 rows. The 'Order Date' column is selected, and the 'Text transform' menu is open. The menu options include: Transform..., Common transforms, Transpose, Sort..., View, Reconcile, Cluster and edit..., Replace..., To number, To date, To text, To null, and To empty string. The 'To date' option is highlighted.

Row ID	Order ID	Order Date	Ship Date	Ship Mode	Customer ID	Customer Name	Segment	City	State	Country	Postal Code	Market
1.	32296	CA-2012-124891	2012-07-31T00:00:00Z	Same Day	RH-19495	Rick Hansen	Consumer	New York City	New York	United States	10024	US
2.	26341	IN-2013-77678	2013-05-01T18:30:00Z	Second Class	JR-16210	Justin Ritter	Corporate	Wollongong	New South Wales	Australia		APAC
3.	25330	IN-2013-71249	2013-10-17T00:00:00Z	First Class	CR-12730	Craig Reiler	Consumer	Brisbane	Queensland	Australia		APAC
4.	13524	ES-2013-1579342	2013-01-28T00:00:00Z	First Class	KM-16375	Katherine Murray	Home Office	Berlin	Berlin	Germany		EU
5.	47221	SG-2013-4320	2013-05-10T18:30:00Z	Same Day	RH-19495	Rick Hansen	Consumer	Dakar	Dakar	Senegal		AFRICA
6.	22732	IN-2013-42360	2013-06-10T18:30:00Z	Second Class	JM-15655	Jim Michum	Corporate	Sydney	New South Wales	Australia		APAC
7.	30570	IN-2011-81626	2011-07-10T18:30:00Z	First Class	TS-21340	Toby Swindell	Consumer	Porirua	Wellington	New Zealand		APAC
8.	31192	IN-2012-86369	2012-04-14T00:00:00Z	Standard Class	MB-18085	Mick Brown	Consumer	Hamilton	Waikato	New Zealand		APAC
9.	40155	CA-2014-135959	2014-10-14T00:00:00Z	Standard Class	JW-15220	Jane Waco	Corporate	Sacramento	California	United States	95823	US
10.	40936	CA-2012-110636	2012-01-28T00:00:00Z	Second Class	JH-15985	Joseph Holt	Consumer	Concord	North Carolina	United States	28027	US

The screenshot shows the OpenRefine Global Superstore.xlsx project with 51290 rows. The 'Order Date' column is selected, and the 'Text transform' menu is open. A yellow highlight is present on the 'Text transform on 31,223 cells in column Order Date: value.toDate()' option. The 'Undo' button is also visible.

Row ID	Order ID	Order Date	Ship Date	Ship Mode	Customer ID	Customer Name	Segment	City	State	Country	Postal Code	Market	
1.	32296	CA-2012-124891	2012-07-31T00:00:00Z	7/31/2012	Same Day	RH-19495	Rick Hansen	Consumer	New York City	New York	United States	10024	US
2.	26341	IN-2013-77678	2013-05-01T18:30:00Z	2013-07-01T18:30:00Z	Second Class	JR-16210	Justin Ritter	Corporate	Wollongong	New South Wales	Australia		APAC
3.	25330	IN-2013-71249	2013-10-17T00:00:00Z	10/18/2013	First Class	CR-12730	Craig Reiler	Consumer	Brisbane	Queensland	Australia		APAC
4.	13524	ES-2013-1579342	2013-01-28T00:00:00Z	1/30/2013	First Class	KM-16375	Katherine Murray	Home Office	Berlin	Berlin	Germany		EU
5.	47221	SG-2013-4320	2013-05-10T18:30:00Z	2013-06-10T18:30:00Z	Same Day	RH-19495	Rick Hansen	Consumer	Dakar	Dakar	Senegal		AFRICA
6.	22732	IN-2013-42360	2013-06-10T18:30:00Z	2013-01-06T18:30:00Z	Second Class	JM-15655	Jim Michum	Corporate	Sydney	New South Wales	Australia		APAC
7.	30570	IN-2011-81626	2011-07-10T18:30:00Z	2011-09-10T18:30:00Z	First Class	TS-21340	Toby Swindell	Consumer	Porirua	Wellington	New Zealand		APAC
8.	31192	IN-2012-86369	2012-04-14T00:00:00Z	4/19/2012	Standard Class	MB-18085	Mick Brown	Consumer	Hamilton	Waikato	New Zealand		APAC
9.	40155	CA-2014-135959	2014-10-14T00:00:00Z	10/21/2014	Standard Class	JW-15220	Jane Waco	Corporate	Sacramento	California	United States	95823	US
10.	40936	CA-2012-110636	2012-01-28T00:00:00Z	1/31/2012	Second Class	JH-15985	Joseph Holt	Consumer	Concord	North Carolina	United States	28027	US

Formatting the order date column to date format

Global Superstore.xlsx - OpenRefine

127.0.0.1:3333/project?project=2527587983634&ui=%7B%22facets%3A%5B%5D%7D

OpenRefine Global Superstore.xlsx

Facet / Filter Undo / Redo 1/1

51290 rows

Using facets and filters

Use facets and filters to select subsets of your data to act on. Choose facet and filter methods from the menus at the top of each data column.

Not sure how to get started? Watch these screencasts

Facet / Filter

Text facet

Facet

Text filter

Edit cells

Edit column

Transpose

Sort...

View

Reconcile

Cluster and edit...

Replace

First CL...

Transform...

Common transforms

Trim leading and trailing whitespace

Collapse consecutive whitespace

Unescape HTML entities

Replace smart quotes with ASCII

To titlecase

To uppercase

To lowercase

To number

To date

To text

To null

To empty string

JavaScript

25°C Mostly cloudy

Search

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1946 03-07-2024

Similarly converting ship date to date format.

Global Superstore.xlsx - OpenRefine

127.0.0.1:3333/project?project=2527587983634&ui=%7B%22facets%3A%5B%5D%7D

OpenRefine Global Superstore.xlsx

Facet / Filter Undo / Redo 2/2

51290 rows

Using facets and filters

Use facets and filters to select subsets of your data to act on. Choose facet and filter methods from the menus at the top of each data column.

Not sure how to get started? Watch these screencasts

Facet / Filter

Text facet

Facet

Text filter

Edit cells

Edit column

Transpose

Sort...

View

Reconcile

Cluster and edit...

Replace

First CL...

Numeric facet

Timeline facet

Scatterplot facet...

Custom text facet...

Custom numeric facet...

Customized facets

JavaScript

25°C Mostly cloudy

Search

ENG IN

1947 03-07-2024

Performing text facet:

OpenRefine Global Superstore.xlsx

Facet / Filter **Undo / Redo** 3 / 3

Refresh

Reset all

Remove all

✕

Ship Mode

change

4 choices Sort by: **name** count

Cluster

First Class 7505
Same Day 2701
Second Class 10309
Standard Class 30775

Facet by choice counts

✕

Ship Mode

invert reset

☐ case sensitive ☐ regular expression

Global Superstore.xlsx - OpenRefine

OpenRefine

127.0.0.1:3333/project?project=2527587963634&ui=%7B%22facets%22%3A%5B%5D%7D

OpenRefine Global Superstore.xlsx

Open... Export... Help

Facet / Filter Undo / Redo 3 / 3 7505 matching rows (81290 total)

Refresh

Reset all Remove all

Show as rows records Show: 5 10 25 50 100 500 1000 rows

Ship Mode change

1 choice Sort by: name count

First Class 7505

Facet by choice counts

Ship Mode invert reset

First Class

☐ case sensitive ☐ regular expression

	All	Row ID	Order ID	Order Date	Ship Date	Ship Mode	Customer ID	Customer Name	Segment	City	State	Country	Postal Code	Market	R
3	25330	IN-2013-71249	2013-10-17T00:00:00Z	2013-10-18T00:00:00Z	First Class	CR-12730	Craig Rector	Consumer	Brisbane	Queensland	Australia		APAC	Oceania	
4	13524	ES-2013-1575342	2013-01-20T00:00:00Z	2013-01-30T00:00:00Z	First Class	KM-16375	Katherine Murray	Home Office	Berlin	Berlin	Germany		EU	Central	
7	30570	IN-2011-81625	2011-07-10T18:30:00Z	2011-09-10T18:30:00Z	First Class	TS-21340	Toby Swendell	Consumer	Ponoma	Wellington	New Zealand		APAC	Oceania	
12	28879	ID-2012-26403	2012-04-18T00:00:00Z	2012-04-22T00:00:00Z	First Class	AJ-10760	Anthony Jacobs	Corporate	Kabul	Kabul	Afghanistan		APAC	Central Asia	
19	22056	IN-2014-11763	2014-01-31T00:00:00Z	2014-01-01T18:30:00Z	First Class	JS-15685	Jim Sisk	Corporate	Townsville	Queensland	Australia		APAC	Oceania	
21	46530	PL-2013-7820	2013-06-07T18:30:00Z	2013-10-07T18:30:00Z	First Class	AB-600	Ase Blume	Corporate	Rybn	Silesia	Poland		EMEA	EMEA	
22	31781	CA-2011-154627	2011-10-28T00:00:00Z	2011-10-31T00:00:00Z	First Class	SA-20830	Sae Ann Rood	Consumer	Chicago	Illinois	United States	60610	US	Central	
23	21586	IN-2011-48803	2011-02-04T18:30:00Z	2011-02-04T18:30:00Z	First Class	JK-15325	Jasen Kianczynski	Corporate	Suzhou	Anhui	China		APAC	North	
25	1510	US-2014-133193	2014-07-31T00:00:00Z	2014-01-07T18:30:00Z	First Class	NP-16325	Nancy Patel	Consumer	Jutrez	Chihuahua	Mexico		LATAM	North	
26	3484	MX-2016-165309	2016-05-08T18:30:00Z	2016-05-08T18:30:00Z	First Class	VD-21670	Valerie Dominguez	Consumer	Soyapango	San Salvador	El Salvador		LATAM	Central	

25°C Mostly cloudy

Search

ENG IN 19:49 03-07-2024

☐ case sensitive
 ☐ regular expression

×

Ship Mode

change reset

grel:facetCount(value, "value", "Ship Mode")

The screenshot shows the OpenRefine web interface. At the top, there's a browser address bar with a long URL. Below it, the 'Global Superstore.xlsx' file is loaded, showing 51290 rows. A facet is applied to the 'Segment' column, with a bar chart showing three categories: Consumer (20518), Corporate (15429), and Home Office (9343). The facet expression is 'grel:facetCount(value, "value", "Segment")'. A dialog box titled 'Edit facet's Expression based on Column Segment' is open, showing the same expression and a preview table.

row	value	facetCount(value, "value", "Segment")
1.	Consumer	20518
2.	Corporate	15429
3.	Consumer	20518
4.	Home Office	9343
5.	Consumer	20518
6.	Corporate	15429

OpenRefine Global Superstore.xlsx

Facet / Filter Undo / Redo 6 / 5 51290 rows

Refresh Reset all Remove all

Segment 3 choices Sort by: name count Cluster

Segment 9,000 — 27,000

Global Superstore.xlsx

Replace

Find null

☐ case insensitive ☐ whole word ☐ regular expression

Leave blank to add the replacement string after each character. Check "regular expression" to find special characters (new lines, tabulations...) or complex patterns.

Replace with 0

☐ use \n for new lines, \t for tabulation, \n for \n, \t for \t.

If "regular expression" option is checked and finding pattern contains groups delimited with parentheses, \$0 will return the complete string matching the pattern, and \$1, \$2... the 1st, 2nd, group.

OK Cancel

Product Name	Segment	City	State	Country	Postal Code	Market	Region	Product ID	Category	Sub-Category	Product Name	Sales	Quantity	Discount
Electronics CS510 - Over-the-Head	Consumer	New York City	New York	United States		East	TEC-AC-10003033		Technology	Accessories	Electronics CS510 - Over-the-Head	2309.65	7	0
Novimex Executive Leather Armchair, Black	Corporate	Volongong	New South Wales	Australia					Furniture	Chairs	Novimex Executive Leather Armchair, Black	3709.395	9	0.1
Nokia Smart Phone, with Caller ID	Consumer	Brisbane	Queensland	Australia					Technology	Phones	Nokia Smart Phone, with Caller ID	5175.171	9	0.1
Motorola Smart Phone, Cordless	Consumer	Berlin	Berlin	Germany					Technology	Phones	Motorola Smart Phone, Cordless	2892.51	5	0.1
Sharp Wireless Fax, High-Speed	Consumer	Dakar	Dakar	Senegal					Technology	Copiers	Sharp Wireless Fax, High-Speed	2832.96	8	0
Samsung Smart Phone, with Caller ID	Corporate	Sydney	New South Wales	Australia					Technology	Phones	Samsung Smart Phone, with Caller ID	2862.675	5	0.1
Novimex Executive Leather Armchair, Adjustable	Consumer	Porirua	Wellington	New Zealand					Furniture	Chairs	Novimex Executive Leather Armchair, Adjustable	1822.08	4	0
Chromcraft Conference Table, Fully Assembled	Consumer	Hamilton	Waikato	New Zealand					Furniture	Tables	Chromcraft Conference Table, Fully Assembled	5244.84	6	0
Fellowes PB500 Electric Punch Plastic Comb Binding Machine with Manual Bind	Corporate	Sacramento	California	United States	95823	US	West	OFF-BI-10003527	Office Supplies	Binders	Fellowes PB500 Electric Punch Plastic Comb Binding Machine with Manual Bind	5083.96	5	0.2
Chromcraft Bull-Nose Wood Oval Conference Tables & Bases	Consumer	Concord	North Carolina	United States	28027	US	South	FUR-TA-10000198	Furniture	Tables	Chromcraft Bull-Nose Wood Oval Conference Tables & Bases	4297.644	13	0.4

OpenRefine Global Superstore.xlsx - OpenRefine

127.0.0.1:3333/project?project=2527587983634&ui=%7B%22facets%3A%5B%5D%7D

OpenRefine Global Superstore.xlsx

Facet / Filter Undo / Redo 7 / 7 51290 rows

Refresh Reset all Remove all

Segment 3 choices Sort by: name count Cluster

Consumer 26518
Corporate 15429
Home Office 9343
Facet by choice counts

Segment gref:facetCount(value, "value", "Segment")

9,000 — 27,000

Order Priority 4 choices Sort by: name count Cluster

Critical 3932
High 15501
Low 2424
Medium 29433
Facet by choice counts

Order Priority 2,000 — 30,000

Country Australia Australia Australia New Zealand New Zealand United States United States

28027 US South FUR-TA-10000198 Furniture Tables with Manual Bind Chronocrast Bul-Nose Wood Oval Conference Tables & Bases 4297.644 13 0.4 -1862.3124 865.74 Critical

Extensions Wikibase

1 next last

Quantity Discount Profit Shipping Cost Order Priority

7 0 762.1849 933.57 Critical

9 0.1 -286.765 923.63 Critical

9 0.1 919.971 915.49 Medium

5 0.1 -96.54 910.16 Medium

8 0 311.52 903.04 Critical

5 0.1 763.275 897.35 Critical

4 0 964.84 894.77 Critical

6 0 996.48 878.38 High

5 0.2 1906.485 867.69 Low

51290 rows

Show as: rows records Show 5 10 25 50 100 500 1000 rows

Country Postal Code Market Region Product ID Category Sub-Category Product Name Sales Quantity Discount Profit Shipping Cost Order Priority

United States 10024 US East TEC-AC-10000333 Technology Accessories Phontronics CS310 - Over-the-Head manual Wireless Headset System

Australia APAC Oceania FUR-CH-10000350 Furniture Chairs Novimes Executive Leather Armchair, Black

Australia APAC Oceania TEC-PH-10000654 Technology Phones Nokia Smart Phone, with Caller ID

Germany EU Central TEC-PH-10004933 Technology Phones Motorola Smart Phone, Cordless

Senegal Africa Africa TEC-SHA-10000501 Technology Copiers Sharp Wireless Fax, High-Speed

Australia APAC Oceania TEC-PH-10000330 Technology Phones Samsung Smart phone, with Caller ID

New Zealand APAC Oceania FUR-CH-10000450 Furniture Chairs Novimes Executive Leather Armchair, Adjustable

New Zealand APAC Oceania FUR-TA-10000558 Furniture Tables Chronocrast Conference Table, Fully Assembled

United States 95823 US West OFF-BI-10000527 Office Supplies Fellowes PB500 Electric Punch

United States 28027 US South FUR-TA-10000198 Furniture Tables Chronocrast Bul-Nose Wood Oval Conference Tables & Bases

Facet

Text facet

Numeric facet

Timeline facet

Edit cells

Scatterplot facet...

Edit column

Transpose

Custom text facet...

Custom numeric facet...

Customized facets

Sort...

View

Reconcile

Scatterplot matrix (focusing on Sales)

Row ID

Sales

Quantity

Discount

Profit

Shipping Cost

lin log

Close

Shipping Cost Order Priority

933.57 Critical

923.63 Critical

915.49 Medium

910.16 Medium

903.04 Critical

897.35 Critical

894.77 Critical

878.38 High

867.69 Low

865.74 Critical

