Talend Data Preparation Free Desktop Installing Guide

พิชิตชัย พิมพ์โคตร

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Requirements for Talend Data Preparation Free Desktop

Hardware requirements

Processor	64-bit processor is required
Alllocated memory	1GB minimum
Disk space	500MB minimum + datasets = 5GB recommended

Software requirements

Operating system	• Windows 7 64-bit or more recent • Mac OS X 10.7 “Lion” or more recent

Compatible Web browsers

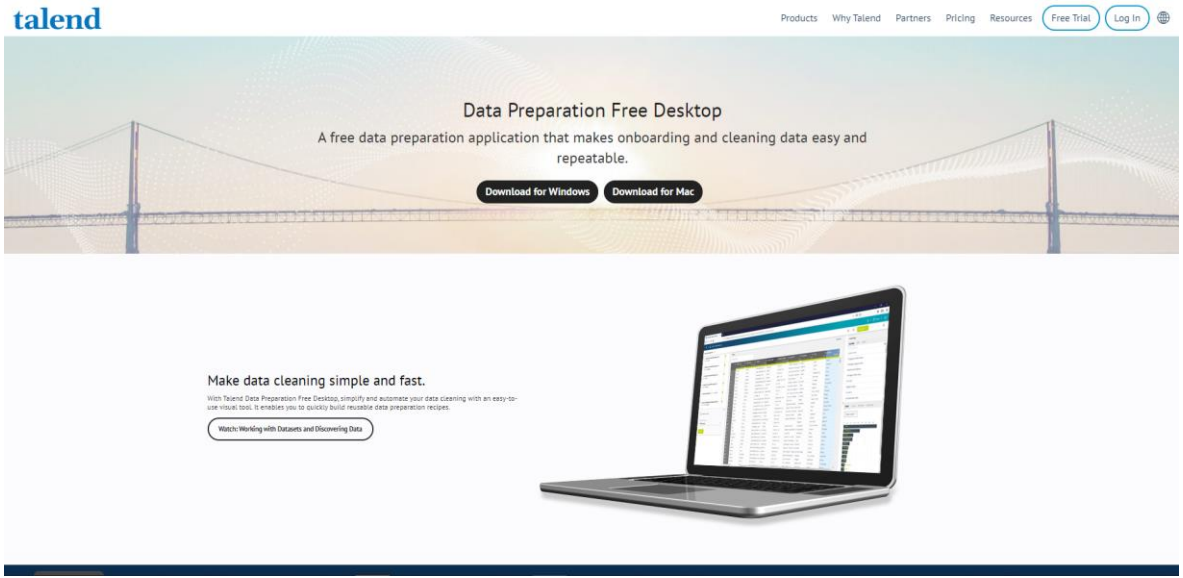
Mozilla Firefox / Firefox ESR	Latest version
Microsoft Internet Explorer	11
Microsoft Edge	Latest version
Apple Safari	10
Google Chrome	Latest version

Here is the software and hardware information required and recommended to get started with Talend Data Preparation.

Java:

There are no specific Java requirements for most of Windows and Apple computers. However, if you want to install the Apache version of Talend Data Preparation, you must have Oracle Java 8 64-bit installed on your computer. The default Windows 32-bit version is not supported, only the 64-bit version is.

Download Installer Package



Download Talend Data Preparation here
>> Click <<

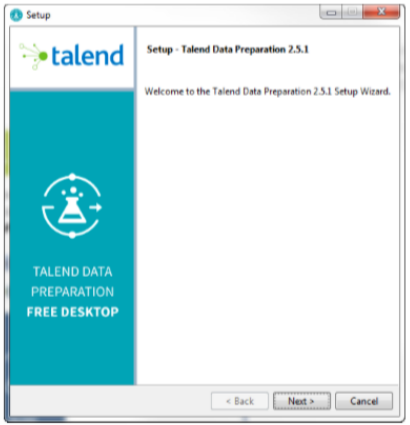
Select your operating system, and the download starts automatically.

Link download : https://www.talend.com/products/data-preparation/data-preparation-free-desktop/?qt-product_tos_download_new=5

Set-up Talend Data Preparation on Windows

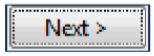
1

Locate the file you have just downloaded and double click **Talend-DataPreparation-Free-Desktop-2.5.exe**



2

Click **Next** through the setup and use the default settings.



3

Click **Finish** once the Install is complete.

4

Use the Desktop icon or the shortcut on the Start menu to begin using the Talend Data Preparation tool.

talend

Set-up Talend Data Preparation on Mac

1

Double-click the Talend-DataPreparation-Free-Desktop-2.5.dmg file to open the package.

2

Drag and drop into the Applications folder.

3

Talend Data Preparation will now be in your list of **Applications**. Locate the icon and double click to open the application.

talend

4

To disable **App Nap** and ensure optimal performance, follow this quick procedure:

1. Open the Terminal from the `/Applications/Utilities` folder.

2. Enter the following command:

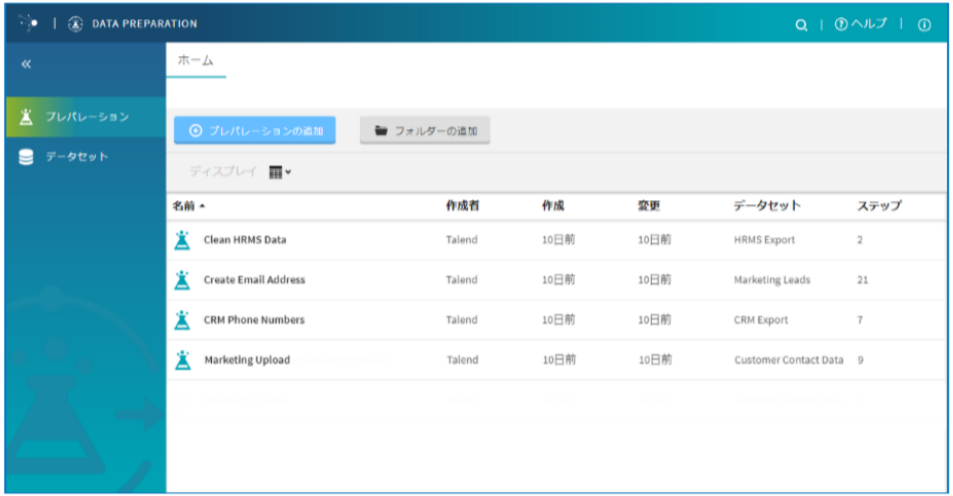
```
defaults write org.talend.dataprep NSAppSleepDisabled -bool YES
```

Configuring the language of the interface

1. Open the `<TDP_Installation_Path>/dataprep/config/application.properties` configuration file.

2. For the `dataprep.locale` parameter, enter one of the three supported values:
   - **en-US** for English
   - **fr-FR** for French
   - **ja-JP** for Japanese

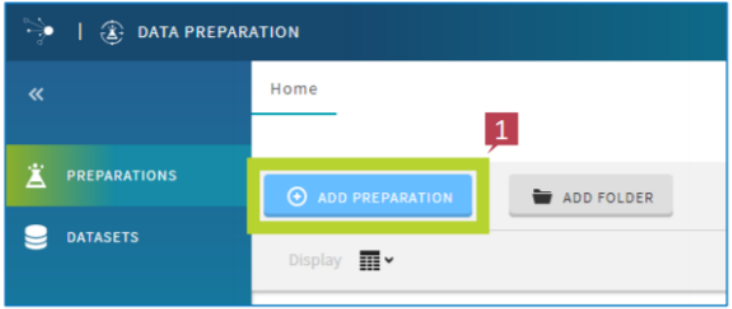
3. Restart Talend Data Preparation Free Desktop.

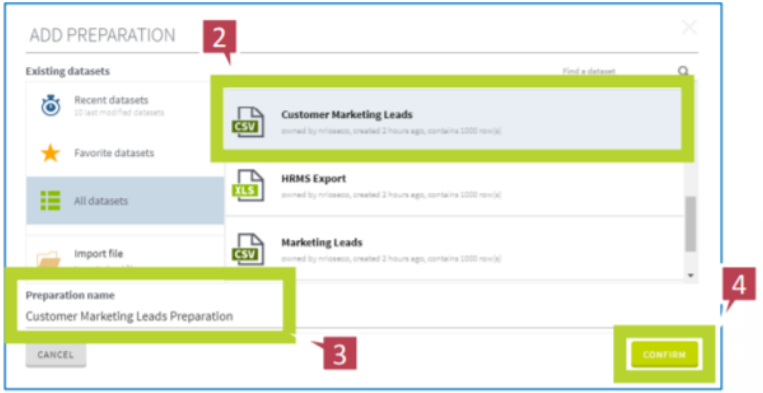


How to add a preparation?

To get started on the example:

1. Click the **Add Preparation** button from the **Preparations** view.
2. The **Add Preparation** dialog opens. Click the **Customers Marketing Leads** dataset from the **All Datasets** list.
3. Choose a **name** for your preparation.
4. Click **Confirm** to open the preparation and start cleansing the data from the dataset.





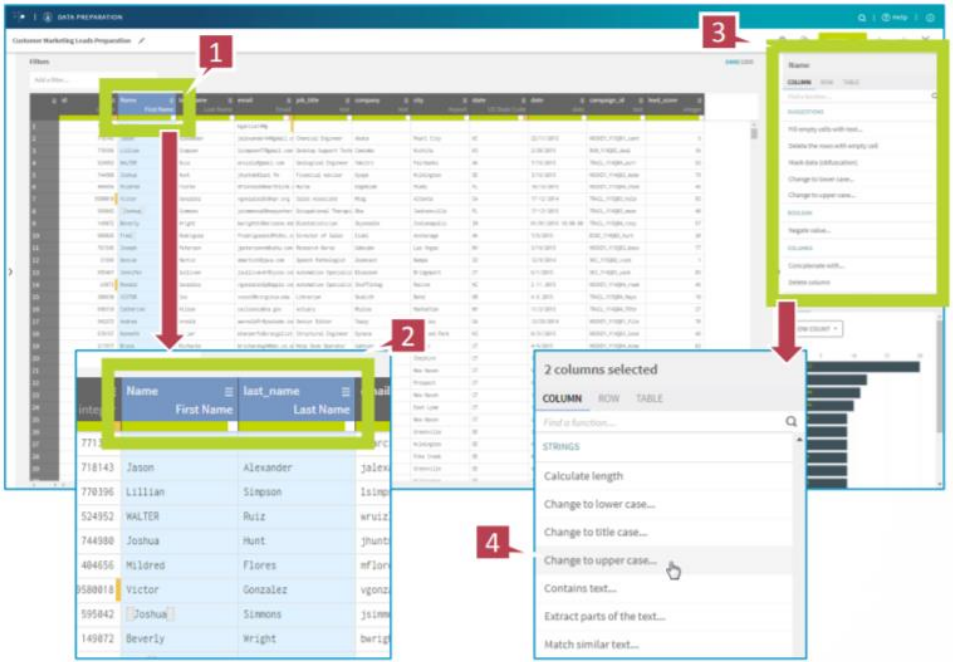
Manipulate data

Simple cleansing examples

First, let's fix the **Name** column:

1. Click the header of the **Name** column.
2. While pressing the **Ctrl** key, click the header of the **last_name** column. Both columns are now selected. You can also use **Shift + click** to select multiple columns.
3. In the top right corner is a box with all the **Functions** available. You can search for functions or use one of the suggested functions to improve your data.
4. You may need to scroll, down depending on your screen resolution, to find the **Change to upper case** function. **Hover over the function to preview its effect on the data. Click the function to apply the changes to the two selected columns.**

Here we are cleaning up the customer name fields to do some basic standardization, You can see that there are mixed case names, leading and training Spaces and the last name has been defined as an incorrect type.



Manipulate data

Simple cleansing examples

To execute basic formatting and cleansing:

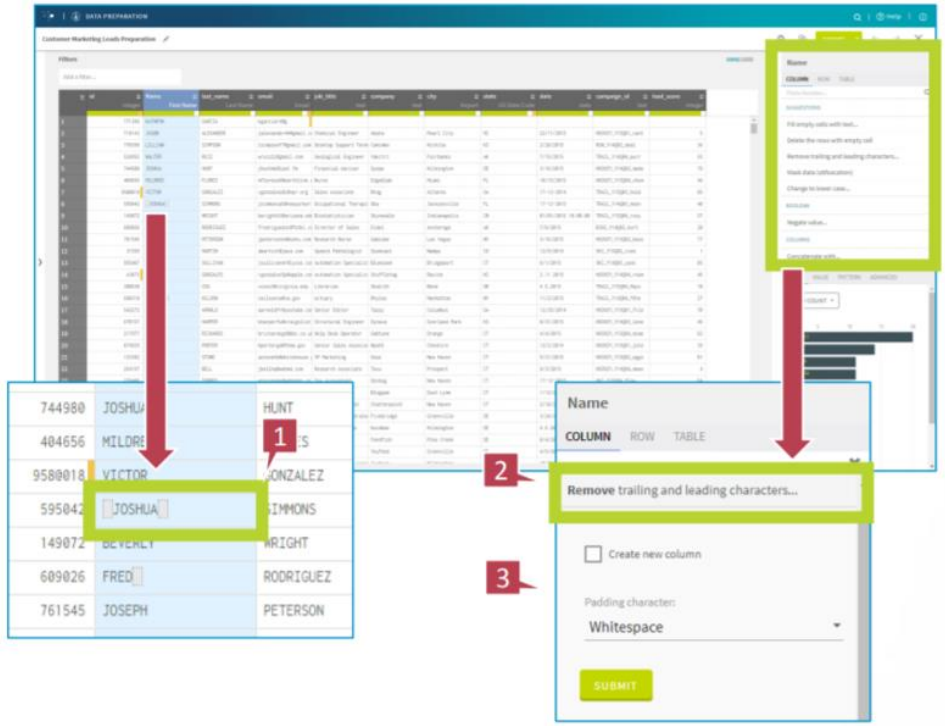
Name column, continued.

1. While looking at the data, you will see grey boxes in front or behind some names, for example “Joshua”.

2. To remove those grey boxes, search for and select the **Remove trailing and leading characters** function.

3. Leave the **Create new column** checkbox clear. In the **Padding character** drop-down list, select **Whitespace** and click **Submit**.

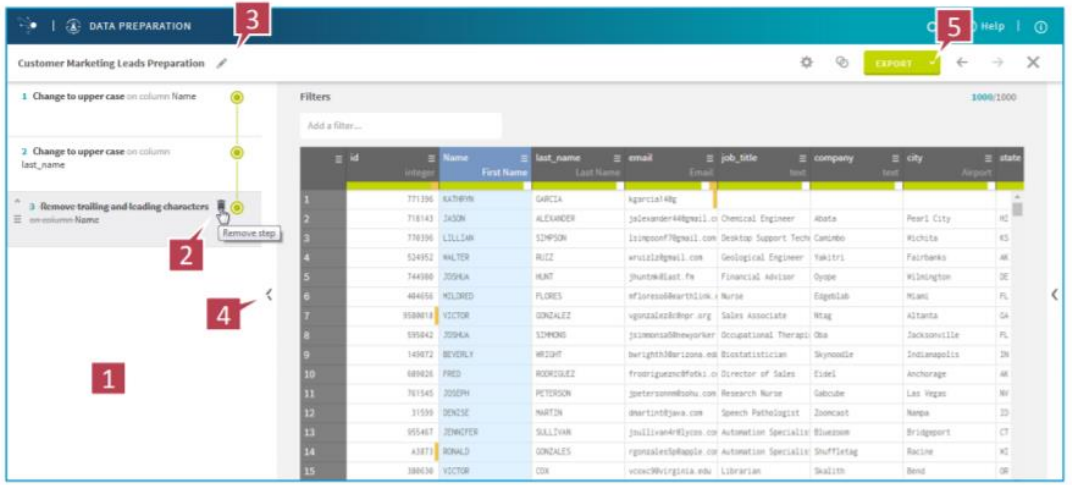
Several functions, including this one, allow you to output the result of the transformation in a new column by selecting the **Create new column** checkbox. If you do not select it, the function will be applied in the current column.



Manipulate data

Recipes

1. Every time you apply a function, it is added to the recipe panel on the left.
2. **To delete a recipe item**, point your mouse over the line item and click the trash can icon.
3. **To rename a preparation**, click the pencil icon and enter a new name.
4. The recipe panel can be hidden by clicking the arrow.
5. To export the result of your preparation, click **Export** and select a file type.



Because you created this preparation using the **Add Preparation** button, you do not need to save anything. Every new preparation step is automatically saved.

Multiple preparations can be saved and created for a single dataset.

Remember that the original data from your dataset remains unchanged.

Manipulate data

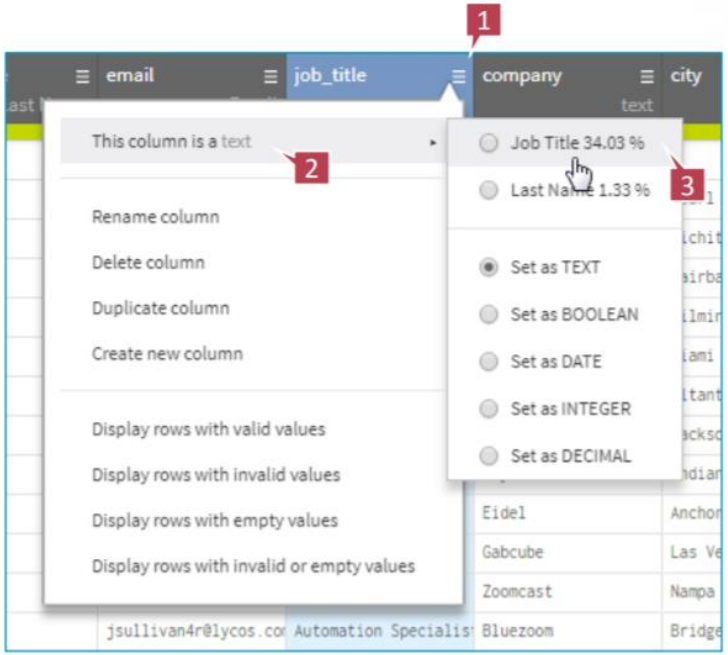
Semantic type

Talend Data Preparation automatically suggests the proper semantic type for each column of your datasets. It will help you to further discover the data. But you can change those suggestion at any time, based on your own experience.

The suggested semantic type for the **job_title** column is **Text**. Let's change it to a more meaningful one, **Job Title** in this case.

1. Click the **menu icon** on the column header and select a new semantic type.
2. Point your mouse over **This column is a text**.
3. Select **Job Title** as new semantic type.

The Enterprise Edition of Talend Data Preparation allows you to create custom semantic types, as well as editing or removing the default ones.

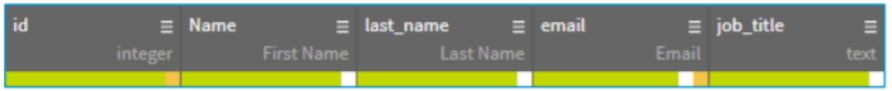


Manipulate data

Data quality bar

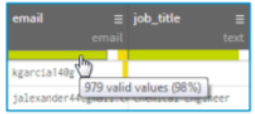
Under each column is a data quality bar that displays the amount of fields that have correct data, empty fields, or incorrect data. Each of these 3 are represented by a color.

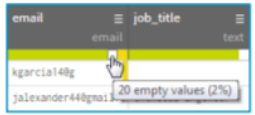
- **Green** – Data matches the cell format
- **White** – Empty cells
- **Orange** – Data in the cell does not match the cell format

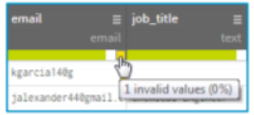


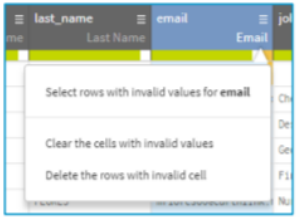
Let's take a closer look at the quality bar for the **email** column. Exact numbers and percentages can be found by pointing your mouse over each color.

- **Green** – 979 cells have data in the correct format
- **White** – 20 empty cells
- **Orange** – 1 cells have entries in an incorrect format



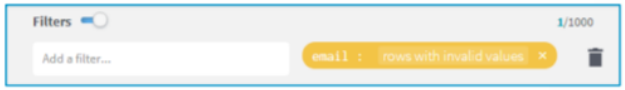






Click any color to select, delete, or clear the cells with data in an invalid format. Click the orange section and click **Select rows with invalid values** for the **email** column to display the entries with an incorrect format.

Don't forget to clear the filter to return to the full list.



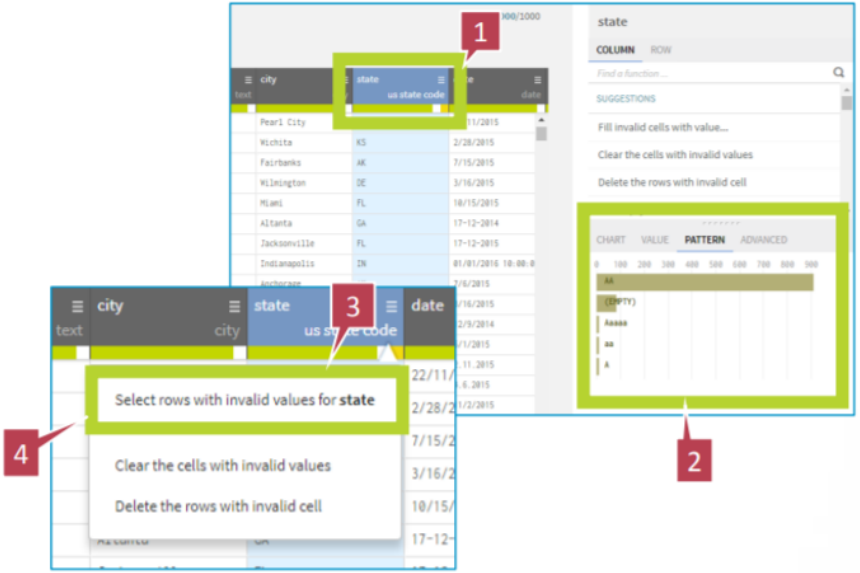
Manipulate data

Basic text manipulation

How to filter invalid rows:

1. Click the header of the **state** column.
2. In the bottom right is a **Pattern** table. Point your mouse over the rows to see counts. The top row indicates that 911 records contain a 2 letter state code. **You can click a bar to isolate those records (to remove the filter, click the x in the filter, or click the bin icon in the filter bar).**
3. On the data quality bar, click the **orange section**.
4. Click **Select rows with invalid values for state**.
5. 7 rows that contain invalid information will be displayed.

Here we are cleaning and changing the values in a field with invalid values. You will see how you can use the charts to help filter the data as well as change values directly in the grid.



Manipulate data

Basic text manipulation

How to filter invalid rows:

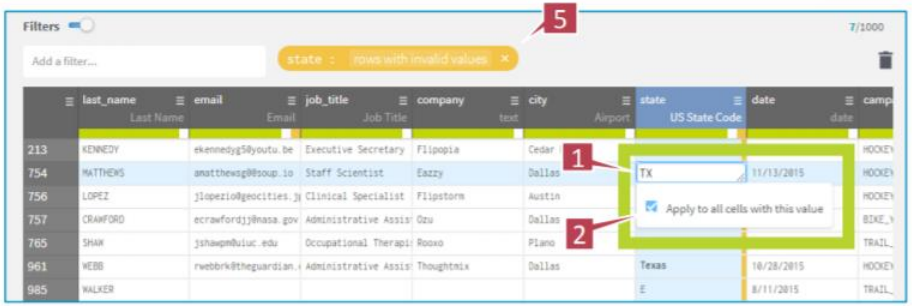
1. To edit the text value in a field, **double-click one of the cells** that contain **Texas**. Change **Texas** to **TX**. DO NOT **hit Enter yet!**

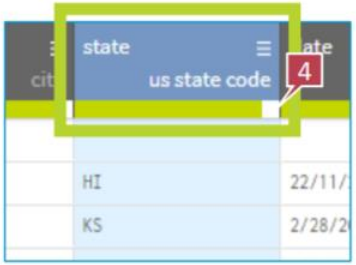
2. Under the cell that you are editing is a check box with the label **Apply to all cell with this value**. Check that box. NOW **hit Enter!** You have changed all cells with the value **Texas** to **TX**.

3. That should leave you with 2 rows with incorrect data. Check out the different functions and **you pick the one you want** to use to fix the invalid state codes!

4. Once all actions and functions are applied, your **data quality bar** under the **state** column should now only contain **green and white**.

5. Click the **x** in the **state: rows with invalid values** filter to return to the full list.

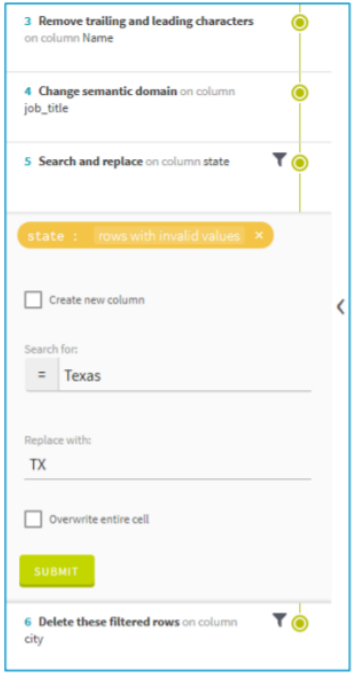




Manipulate data

Recipes

Each function that has been applied has been added to our recipe. Looking at the last steps in the recipe, it is easy to identify that we changed all fields that had **Texas** listed as a state to **TX**.



Manipulate data

Basic numeric manipulation

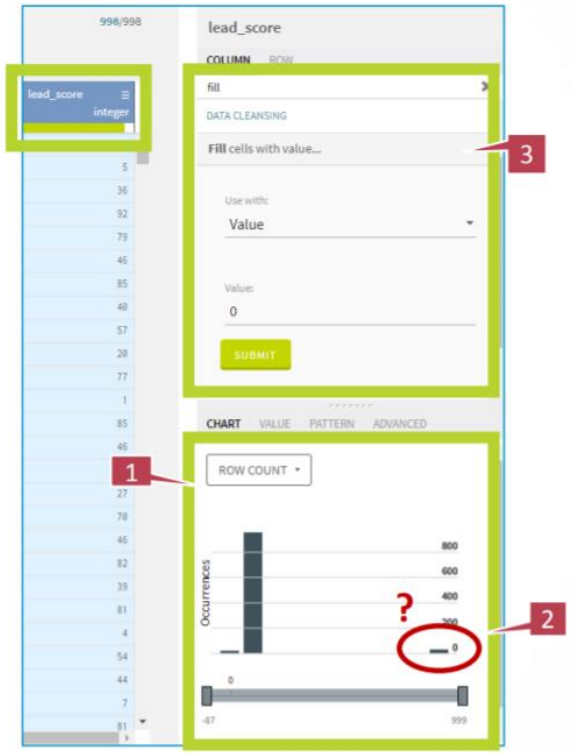
Next, let's look at the **lead_score** column.

1. Select the **lead_score** column. You will see that it contains basic integer values. But look at the **histogram graph** at the bottom right. The data is being skewed by some large value.

2. **Click the blue bar** on the far right of the graph. It should return 31 records with the value of 999. It looks like the default is set to 999. This time, to change the data, you will use a function called **Fill cell with value**.

3. Type **Fill** into the search field in the upper right. Click the function **Fill cell with value**. Set the value to **0** and click **Submit**.

Here, we are cleaning and changing outliers in a numeric field. You will see how you can use charts to help filter the data as well as change values directly in the data grid.



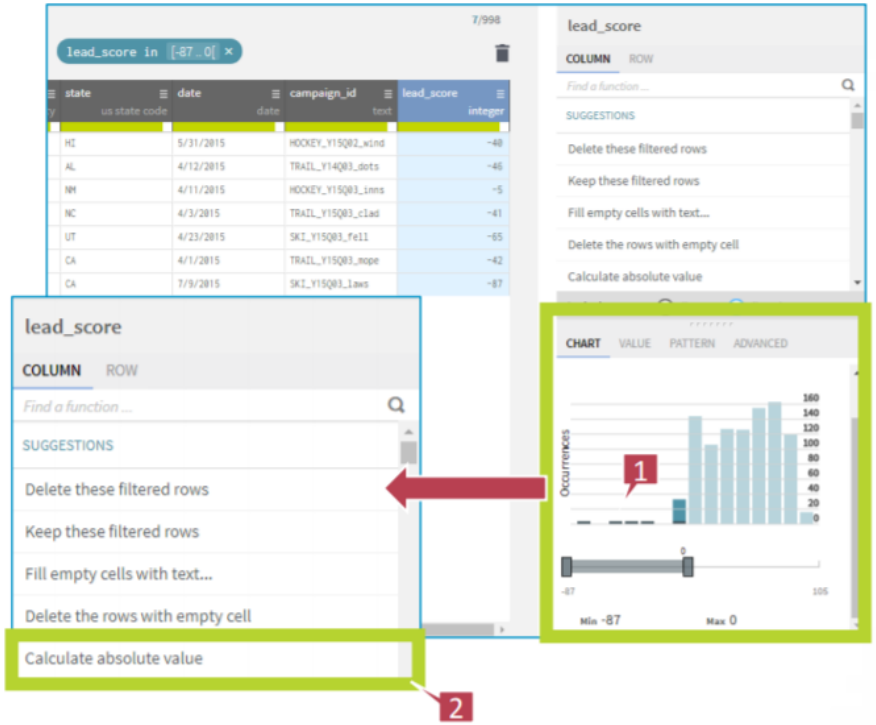
Manipulate data

Basic numeric manipulation

lead_score column, continued.

1. If you take a close look at the graph for the **lead_score** column, you will notice that there are negative lead scores.

2. Since we cannot have negative lead scores, let's remove those values. Under the suggested functions, click **Calculate absolute value**. This will keep the rows with their respective lead score numbers while dropping the negative sign.



Manipulate data

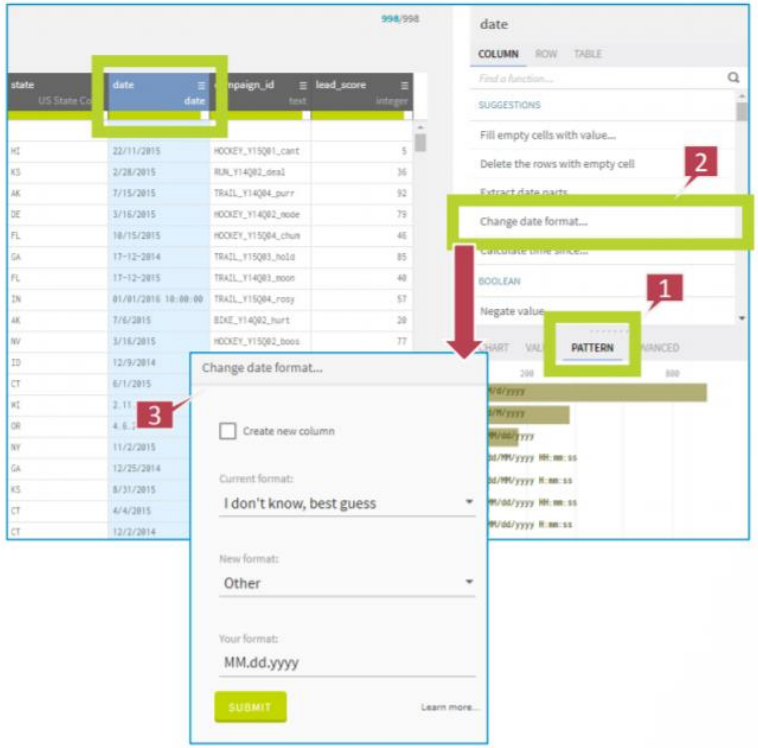
Date cleansing and formatting

Next, look at the **date** column.

1. Click the header of the **date** column, then change the view on the right to **Pattern**. This gives you a better view of the different date formats and masking used. Some dates are formatted in the European standards and others are formatted in the US standard. Some contain **-** and other **/**.

2. To standardize the dates, click **Change date format** under the suggested functions. Select a pre-existing format or type one in. Click **Submit** when ready.

How many times do we see a spreadsheet with all kinds of crazy data formats and standards? We all know that Excel can reformat a date field, but when the dates are a mix of European standards and US standard with different masking, Excel starts to break DOWN!

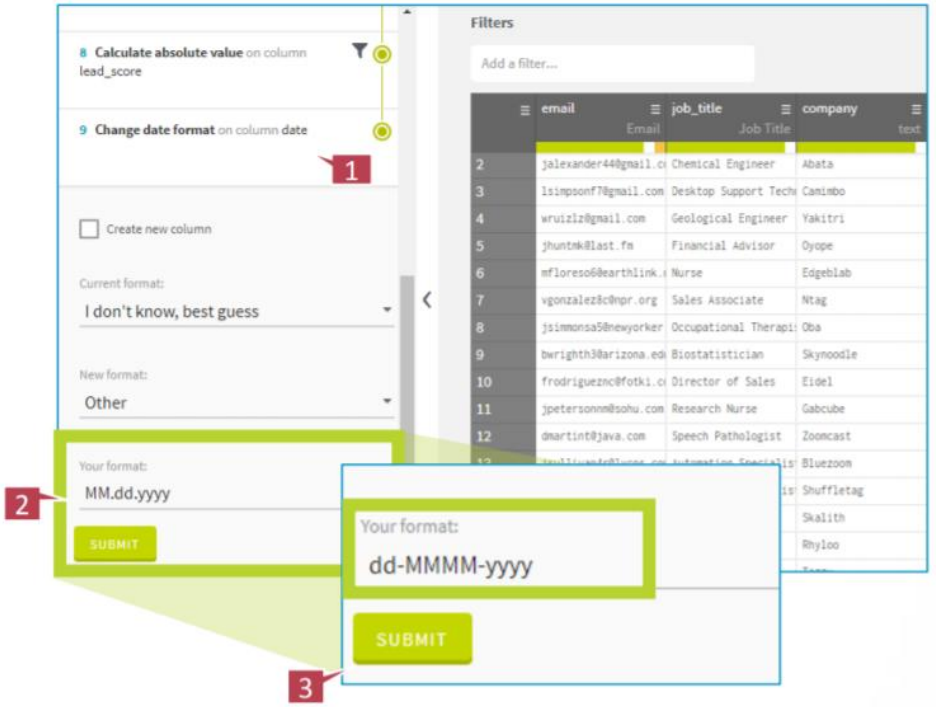


Manipulate data

Date cleansing and formatting

Modifying recipes is simple.

1. From the **recipe** on the left, highlight the last action.
2. In the drop-down for the **Change date format** operation, select **Other** (design your custom pattern). Enter **dd-MMMM-yyyy** (Date formatting is case sensitive so pay attention to the case).
3. Once you click **Submit**, the change will take effect. You can delete a step from the recipe list of actions on the left or click the green dot to inactivate that action.
4. You can also **reorder the steps of your recipe through drag & drop**. You will save time if you realize that a column you applied a function on, still does not fully contain the expected data.



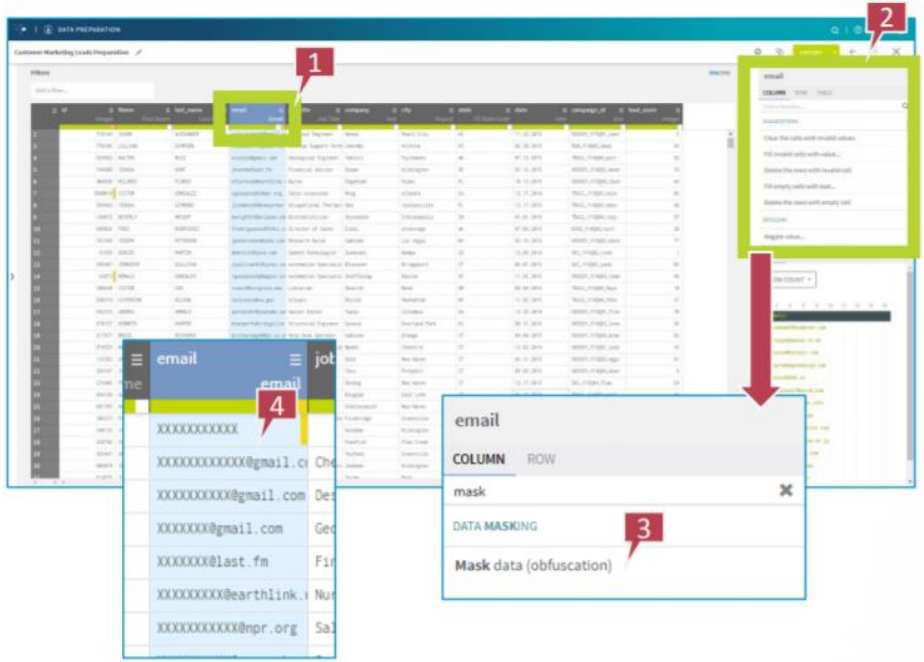
Manipulate data

Data masking

You can easily mask sensitive data.

1. Click the **email** column to select its content.
2. In the function list, search for **Mask data (Obfuscation)**.
3. Click it to apply the function on the email entries.
4. All the characters before @ are replaced by XXX, while the rest is left unchanged. This is the effect of the data masking function on entries whose semantic type is email. But the effects of the data masking will be different depending on a column's semantic type.

When manipulating sensitive data such as names, addresses, credit card or social security numbers, you might want to mask this data. To protect the original data, you will use the data masking function to generate functional substitutes.

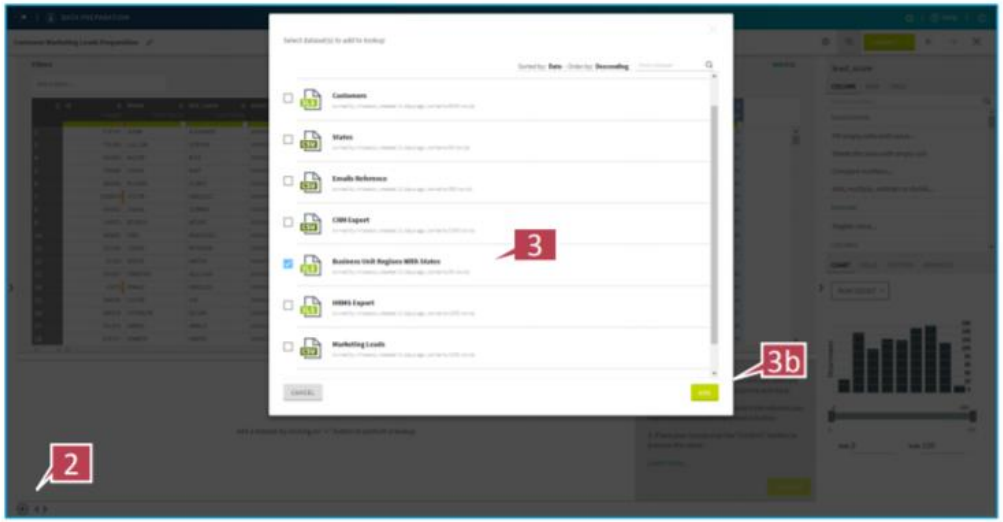


Manipulate data

Data blending

Data blending is about connecting data from different sources. It allows you to take data from another preloaded dataset and add them into the dataset you are currently working on.

1. Click the **Lookup** icon.
2. All the datasets that you have loaded plus some preloaded are available to choose from by clicking the **+** icon.
3. Click the checkbox in front of **Business Unit Regions With States** and click **Add**.



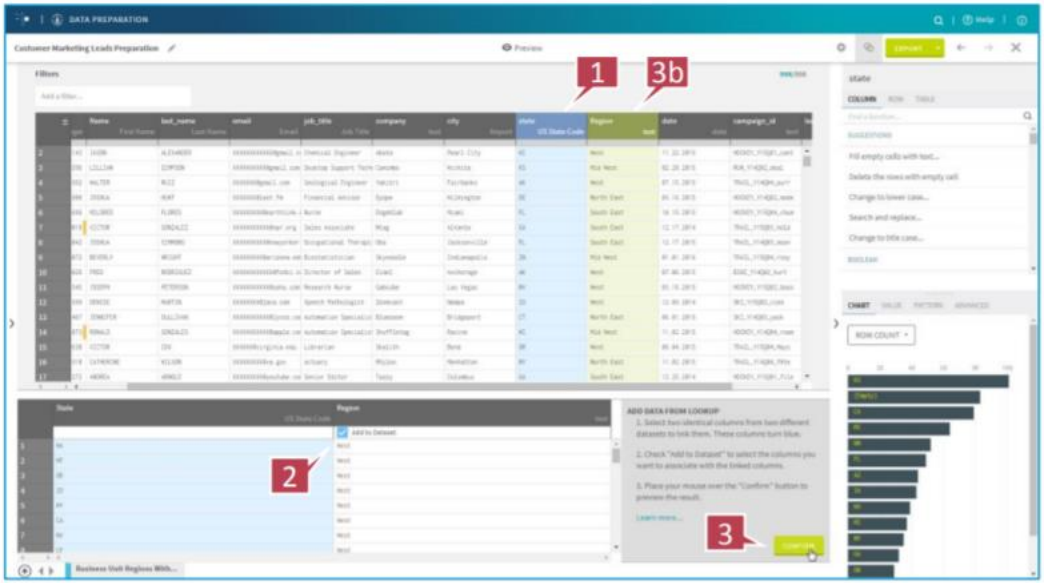
Data blending

Data blending, continued.

1. Click the **column you would like to blend**, the **state** column in your current dataset.

2. At the bottom, add the region information by clicking **Add to dataset** under the **Region** column header.

3. **Point your mouse over the Confirm button** to preview the changes, that are displayed in green. To accept the changes, click **Confirm**.

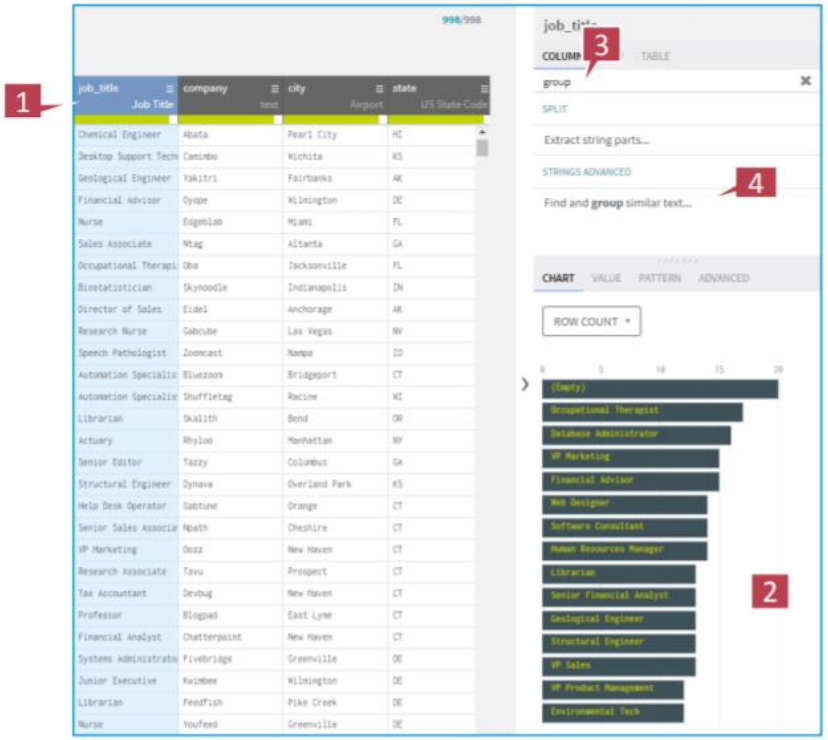


Manipulate data

Group and standardize

Group and standardize allows you to find cells that have similar content and group them together by changing the text to match.

1. Click the **job_title** column header.
2. The chart on the bottom right displays the large amount of slightly different job titles. To reduce the number of job titles, let's group similar job titles together.
3. In the search field, search for **group**.
4. Click the **Find and group similar text** function.



Manipulate data

Find and group similar text

Group and standardize, continued.

1. All similar job titles are grouped together in the second column
2. The third column suggests a job title that could **replace** the data in the second column. You can **use the drop-down list to choose a different job title or type in an appropriate job title**.
3. If you do not want to change a specific job title, leave the check box in front of the job title **clear**.
4. If you do no want to change a group of job titles, leave the check box in front of the first column **clear**.
5. Click **Submit** when finished.