

# ReKisstory Tutorial for Data Mix with Spatial Data

2024-05-14

Go Sugimoto

In this document, you will learn how to use the ReKisstory data integration (Data Mix) by CSV import, using a sample spatial data

## 1 Compare external spatial data with our service

It is easy to integrate our search results with your data with geo-coordinates to perform an interesting spatial analysis.

As an example, we use a publicly available dataset containing all known mint houses in, or producing for, the Low Countries between the 6th and 21st centuries (Stapel, Rombert, 2016, "Mint Houses of the Low Countries", <https://hdl.handle.net/10622/MLVN7A>, IISH Data Collection, V3).

Unfortunately, the geo-coordinates and dates are not in the same format as ReKisstory, thus, we created a sample data with coordinates and dates normalised for you: `Mint_houses_sample.csv` (Please download from the Tutorial main page) In future, you probably need to process your data at hand before by data import. You may not need to "map" your data, because we have a simple data mapping function. However, it is important to follow our data type format in your data, so we can render your data correctly. This is especially true for geo-coordinates and dates.

# Walk-through

Go to the Data Mix page from the top menu bar. The design of the page may differ, but functionalities should be the same.

## Import CSV file (Step 1A)

Home    GROUP SEARCH    COMPARISON SEARCH    DATA INTEGRATION    HELP

### External data integration with our service

- Here you can integrate external data with our Comparison Search results
- Three methods are available to import data (CSV upload, REST API, or SPARQL)
- Follow Step 1 to Step 6
- Various types of data including statistics should work, but it is best for visualization to have
- This service is tested with simple structured data and endpoints, complicated settings may
- You can start the data integration (Step 1) at any point of this process, but a start-over will data in CSV and upload it again
- Mandatory field

### Step 1A: CSV file upload from your local machine

- You can only upload one CSV file at a time
- Only first 100 rows will be imported

Select a CSV file from your local machine

Mint\_hous...ample.csv

- Click the Select File button and locate the downloaded CSV file on your local machine.
- Click Upload
- If you see the success message, your file is successfully imported.

## Reformat CSV (Step 2A)

### Step 2A: Check the imported CSV and extract records

You can specify two parameters to extract the right part of CSV. This extraction is not perfect. You might find it easier to reformat your CSV file on your local machine first

**Check the structure of CSV in Table and Text**

For checking purpose, the index column is added on the left, which will be removed afterwards. The index is for hint only.

Type a keyword...

Index	X;Y;XY WKT;MINT;AUTHORITY;ID;DATEFrom;DATEto;ALLOY;SOURCE	
0	32247;51209348;POINT (3.2247 51.209348);Bruges;Carolingians;BG;0864-01-01;0875-12-31;;"Dataset Coin Production Low Countries (IISH); Vanhoudt	Atlas der Munten (2nd ed. 2007); Vanhoudt Munten van de Nederlanden (2015); Van Gelder Nederlandse munten (8th ed. 2002); Polak Muntchaos (1998)
1	32247;51209348;POINT (3.2247 51.209348);Bruges;Carolingians;BG;0896-01-01;0923-12-31;;"Dataset Coin Production Low Countries (IISH); Vanhoudt	Atlas der Munten (2nd ed. 2007); Vanhoudt Munten van de Nederlanden (2015); Van Gelder Nederlandse munten (8th ed. 2002); Polak Muntchaos (1998)
2	32247;51209348;POINT (3.2247 51.209348);Bruges;Flanders;BG;0989-01-01;1067-12-31;;"Dataset Coin Production Low Countries (IISH); Vanhoudt	Atlas der Munten (2nd ed. 2007); Vanhoudt Munten van de Nederlanden (2015); Van Gelder Nederlandse munten (8th ed. 2002); Polak Muntchaos (1998)
3	32247;51209348;POINT (3.2247 51.209348);Bruges;Flanders;BG;1180-01-01;1220-12-31;;"Dataset Coin Production Low Countries (IISH); Vanhoudt	Atlas der Munten (2nd ed. 2007); Vanhoudt Munten van de Nederlanden (2015); Van Gelder Nederlandse munten (8th ed. 2002); Polak Muntchaos (1998)
4	32247;51209348;POINT (3.2247 51.209348);Bruges;Flanders;BG;1250-01-01;1364-12-31;;"Dataset Coin Production Low Countries (IISH); Vanhoudt	Atlas der Munten (2nd ed. 2007); Vanhoudt Munten van de Nederlanden (2015); Van Gelder Nederlandse munten (8th ed. 2002); Polak Muntchaos (1998)
5	32247;51209348;POINT (3.2247 51.209348);Bruges;Flanders;BG;1386-01-01;1386-12-31;;"Dataset Coin Production Low Countries (IISH); Vanhoudt	Atlas der Munten (2nd ed. 2007); Vanhoudt Munten van de Nederlanden (2015); Van Gelder Nederlandse munten (8th ed. 2002); Polak Muntchaos (1998)
6	32247;51209348;POINT (3.2247 51.209348);Bruges;Flanders;BG;1388-01-01;1389-12-31;;"Dataset Coin Production Low Countries (IISH); Vanhoudt	Atlas der Munten (2nd ed. 2007); Vanhoudt Munten van de Nederlanden (2015); Van Gelder Nederlandse munten (8th ed. 2002); Polak Muntchaos (1998)
7	32247;51209348;POINT (3.2247 51.209348);Bruges;Flanders;BG;1599-01-01;1705-12-31;;"Dataset Coin Production Low Countries (IISH); Vanhoudt	Atlas der Munten (2nd ed. 2007); Vanhoudt Munten van de Nederlanden (2015); Van Gelder Nederlandse munten (8th ed. 2002); Polak Muntchaos (1998)
8	32247;51209348;POINT (3.2247 51.209348);Bruges;Flanders;BG;1709-01-01;1709-12-31;;"Dataset Coin Production Low Countries (IISH); Vanhoudt	Atlas der Munten (2nd ed. 2007); Vanhoudt Munten van de Nederlanden (2015); Van Gelder Nederlandse munten (8th ed. 2002); Polak Muntchaos (1998)
9	32247;51209348;POINT (3.2247 51.209348);Bruges;Flanders;BG;1712-01-01;1715-12-31;;"Dataset Coin Production Low Countries (IISH); Vanhoudt	Atlas der Munten (2nd ed. 2007); Vanhoudt Munten van de Nederlanden (2015); Van Gelder Nederlandse munten (8th ed. 2002); Polak Muntchaos (1998)

Showing 1 to 10 of 99 results

X;Y;XY WKT;MINT;AUTHORITY;ID;DATEFrom;DATEto;ALLOY;SOURCE

32247;51209348;POINT (3.2247 51.209348);Bruges;Carolingians;BG;0864-01-01;0875-12-31;;"Dataset Coin Production Low Countries (IISH); Vanhoudt; Atlas der Munten (2nd ed. 2007); Vanhoudt, Munten van de Nederlanden (2015); Van Gelder, Nederlandse munten (8th ed. 2002); Polak, Muntchaos (1998)

32247;51209348;POINT (3.2247 51.209348);Bruges;Carolingians;BG;0896-01-01;0923-12-31;;"Dataset Coin Production Low Countries (IISH); Vanhoudt; Atlas der Munten (2nd ed. 2007); Vanhoudt, Munten van de Nederlanden (2015); Van Gelder, Nederlandse munten (8th ed. 2002); Polak, Muntchaos (1998)

32247;51209348;POINT (3.2247 51.209348);Bruges;Flanders;BG;0989-01-01;1067-12-31;;"Dataset Coin Production Low Countries (IISH); Vanhoudt; Atlas der

- Scroll down to Table view of the CSV file
- Check if there is no error when imported
- Table looks awkward, because the file is not the standard comma separate format. We will correct it

32247;51209348;POINT (3.2247 51.209348);Bruges;Flanders;BG;1180-01-01;1220-12-31;,"Dataset Coin Production Low Countries (IISH); Vanhoudt, Atlas der Munten (2nd ed. 2007); Vanhoudt, Munten van de Nederlanden (2015); Van Gelder, Nederlandse munten (8th ed. 2002); Polak, Muntchaos (1998)"

32247;51209348;POINT (3.2247 51.209348);Bruges;Flanders;BG;1250-01-01;1364-12-31;,"Dataset Coin Production Low Countries (IISH); Vanhoudt, Atlas der

**Record separator/delimiter**

Please specify the separator/delimiter of your records (e.g. "," (comma), ";" (semi-colon))

**Skip first rows**

Specify the number of rows/lines to skip from the top of the file (to exclude unnecessary rows). The first row after the skip will be used as header. If none, type "0", meaning that the first row will be interpreted as header

- Change the Record Separator/Delimiter from default comma (",") to semi-colon (";")
- As the first row of the table is header, leave Skip the first low as "0"
- Click Reformat CSV button

## Check your records & Mapping Table (Step 3 & 4)

**Step 3: Check your CSV, API, or SPARQL records**

• If you see an unexpected result, please try again from Step 1

Type a keyword...

X	Y	XY WKT	MINT	AUTHORITY	ID	DATEfrom	DATEto	ALLOY	SOURCE
32247	51209348	POINT (3.2247 51.209348)	Bruges	Carolingians	BG	0864-01-01	0875-12-31		Dataset Coin Production Low Countries (IISH); Vanhoudt, Atlas der Munten (2nd ed. 2007); Vanhoudt, Munten van de Nederlanden (2015); Van Gelder, Nederlandse munten (8th ed. 2002); Polak, Muntchaos (1998)
32247	51209348	POINT (3.2247 51.209348)	Bruges	Carolingians	BG	0896-01-01	0923-12-31		Dataset Coin Production Low Countries (IISH); Vanhoudt, Atlas der Munten (2nd ed. 2007); Vanhoudt, Munten van de Nederlanden (2015); Van Gelder, Nederlandse munten (8th ed. 2002); Polak, Muntchaos (1998)

- Scroll down to the table view
- Would your table look organised now?
- You need to map the right headers to our target headers in the Mapping Table further below.

#### Step 4: Mapping Table

- You can specify the mapping between your data (CSV file, API, or SPARQL) and the data table used in our service (predefined)
- Please put "Your Column Header" (i.e. column names used in your CSV, keys in the objects used in JSON API, or SPARQL variables) which would correspond to the column headers in our service ("Target Column Header")
- It is important to use the **exact labels** of your column headers/JSON keys/SPARQL variables, which you can check in the generated preview table above. Watch out spaces, dots, underscores, slashes, capital and lower letters
- At least one mapping should be defined.** There is no mandatory fields to map to our headers. "final\_entity\_type\_uri" is required to use different colours and/or hyperlinks for entities (the red row). Names/labels are required to display something in the result table. Date (at least "starttime") and coordinate ("coordinate\_loc") are required for timeline and map respectively. Statistic is required for mixing (see below)(the purple rows). The headers missing in the mapping will be simply absent in the result. For better results, map as much as possible
- Data type should be followed for proper rendering of your input data, but it is not strictly controlled during the mapping
- You can use the same header more than once in the mapping
- It is possible to *mix our data and statistics* in a simplified timeline chart by specifying the statistic column below. A downside is only points in time (no duration data) and label info are shown. If you would like to see duration data, use another column for mapping (Object label etc), but the mixed timeline cannot be generated. Customise the design of the chart further below

Your Column Header	Target Column Header	Data Type	Description	Example
column header 1	final_entity_type_uri	xsd:anyURI (Desirable)	Unique Identifier. URI of entity (Desirable)	123 (integer), "123" (string), <a href="http://dbpedia.org/resource/Shohei_Ohtani">http://dbpedia.org/resource/Shohei_Ohtani</a> (Desirable)
MINT	final_entity_type_name	<a href="#">RDF Literal</a>	Name of entity	Shohei Ohtani
column header 3	object	xsd:anyURI	URI of object	<a href="http://www.wikidata.org/entity/statement/Q34661-100ba6c8-43a9-5d4f-62d9-f3b21f08311a">http://www.wikidata.org/entity/statement/Q34661-100ba6c8-43a9-5d4f-62d9-f3b21f08311a</a>
AUTHORITY	objectLabel	<a href="#">RDF Literal</a>	Name of object	Judith and the Head of Holofernes
column header 5	roleType_uri	xsd:anyURI	URI of predicate	<a href="http://www.wikidata.org/entity/P19">http://www.wikidata.org/entity/P19</a>
column header 6	roleTypeLabel	<a href="#">RDF Literal</a>	Name of predicate	Place of birth
column header 7	image	xsd:anyURI	URI of image for the object	<a href="http://commons.wikimedia.org/wiki/Special:FilePath/Judith%201%20%20cropped%29.jpg">http://commons.wikimedia.org/wiki/Special:FilePath/Judith%201%20%20cropped%29.jpg</a>
DATEfrom	starttime	<a href="#">xsd:dateTime</a>	Starttime of object (Required for timeline)	1368-01-01T00:00:00Z 1368-01-01

- Change the following in the Mapping Table. Those names should be exactly how it appears in the preview Table above. Double-check white spaces, capital letters, commas, dots, etc, when specifying the mapping. You can read the detailed instructions of the mapping later.

Your Column Header	Target Column Header
MINT	Item (link)
AUTHORITY	Object
DATEfrom	Starttime
DATEto	Endtime
XY WKT	Coordinate

- Scroll Down to Step 5

## Perform Comparison Search (Step 5)

### Step 5: Comparison Search: search entities in our service

- You can compare the history of up to four entities
- Inverse properties gives more comprehensive results about the entity, including art works of a person entity, but will slow down the process

Language for your search results (default: English)

Start typing here to find a language

1st entity with Q-name from Wikidata (Q9202 Statue of Liberty, Q154708 Shinji Kagawa, Q219831 The Night Watch)

レオ10世  Include inverse properties  Value on Y-axis (for stats mixing)

**Q49237:**レオ10世 Son of Lorenzo de' Medici fia, pope from 1513 to 1521

**Q2610729:**レオ10世と二人の枢機卿 painting by Raphael

**Q28690884:**レオ10世による贖宥状 null

4th entity to compare

Start typing here to find an entity 4

Include inverse properties  Value on Y-axis (for stats mixing)

Specify the type of contextual timeline

### Step 6: Double-check your input. When everything is ready, hit the button below

- Here is the comparison search of our service
- Start typing “Pope Leo X” in the 1st mandatory input field, and select the right one (Q49237)
- Start typing “Charles V, Holy Roman Emperor” in the 2nd input field, and select the right one (Q32500)
- Start typing “Jacqueline, Countess of Hainaut”, and select the right one (Q467007)
- If you have a better idea, change the entities as you wish, or try it later
- Leave other input as is
- Check you input all again, and click Search & Integrate Data and wait for tens of seconds (i.e. query takes some time without progress bar)

## The result

C...	Entity	Rel...	Object	2nd Rel...	Image	S...	Start...	E...	End...	Proven...	Prov
●	<a href="#">Gembloux</a>		<a href="#">Carolingians</a>			0840-01-01	None years old (None)	0875-12-31	None years old (None)	Externally imported data	<a href="#">Check fact</a>
●	<a href="#">Bruges</a>		<a href="#">Carolingians</a>			0864-01-01	None years old (None)	0875-12-31	None years old (None)	Externally imported data	<a href="#">Check fact</a>
●	<a href="#">Lens</a>		<a href="#">Carolingians</a>			0875-01-01	None years old (None)	0877-12-31	None years old (None)	Externally imported data	<a href="#">Check fact</a>

- If you see the table like above (pin-colors may look different). Your data integration is a success. Examine the table to check if the data is correct and your mapping is what is expected
- Scroll down to see the map view. Would you be able to see the map below?

