

Upload Experiment Data via Spreadsheet

If your project data is stored in a spreadsheet, using the XNAT CSV Uploader is the most expedient way of getting that data into your XNAT project. To use the CSV Uploader from anywhere in the application, go to **Upload > Spreadsheet** in the top navigation.



In this demo, we are uploading subject demographic data from the [mBIRN_calib project on XNAT Central](#). You can download the example CSV spreadsheet file here: [csv-upload-raw-data.csv](#)

Configure Your Upload Template

Step 1: Select the root data type to be inserted.

Title: (This will be used to reload this spreadsheet template at a later date.)

Root Data Type: [Show All](#)

Or, load a saved template.

Mon Dec 26 16:34:49 UTC 2016 [Oasis Subjects](#)

1. Name your new upload template. Or, you can select a previously loaded template, if you have used the uploader before.

2. Select the root data type you will be uploading to. In this case, since we are uploading subject data, your root data type will be `xnat:subjectData`. In our CSV file, each new line will correspond to a single subject record. If we were uploading experiment data, each new line would correspond to a single experiment record.



You can click the "Show All" link to reveal every known data type in XNAT, if you need to upload data of a type that hasn't been uploaded to XNAT before.

3. Click Submit.

In the next step, we will configure the fields that the data in your CSV file will map to. Here is the raw export data we are starting with:

```
Subject,M/F,Hand,YOB
50782592,M,R,1964
58259524,M,R,1968
73213384,M,R,1964
79363080,F,R,1959
99657608,M,R,1968
```

4. Select Your Related Fields. Browse through the list of attributes associated with your root data type, and select the appropriate fields. The gender, handedness and year of birth attributes in our CSV file can be found in `xnat:subjectData/demographics/xnat:demographicData`.

Step 2: Select the fields which will map to columns in your comma-delimited file.

Check All

xnat:subjectData/ID (Required)

- xnat:subjectData/investigator_xnat_investigatordata_id
- xnat:subjectData/group
- xnat:subjectData/label
- xnat:subjectData/src
- xnat:subjectData/initials
- xnat:subjectData/investigator/title
- xnat:subjectData/investigator/firstname
- xnat:subjectData/investigator/lastname
- xnat:subjectData/investigator/institution
- xnat:subjectData/investigator/department
- xnat:subjectData/investigator/email
- xnat:subjectData/investigator/phone
- xnat:subjectData/investigator/ID
- xnat:subjectData/investigator/xnat_investigatorData_id
- xnat:subjectData/investigator/meta/xft_version
- xnat:subjectData/investigator/meta/row_last_modified
- xnat:subjectData/meta/xft_version
- xnat:subjectData/meta/row_last_modified

xnat:subjectData/demographics (SELECT)

This field can be extended by multiple data types. Please select the data-type you would like to use.

xnat:subjectData/metadata (SELECT)

This field can be extended by multiple data types. Please select the data-type you would like to use.



An ID field for your subject data is automatically generated in the first column of the template file, and does not have to be selected.

5. **Click Submit.** This will create and save a CSV upload template in your user cache in the XNAT file system.

Fit Your Data to the CSV Upload Template

Now that you have a CSV upload template generated in XNAT, you need to ensure that your spreadsheet of data fits the format that XNAT is looking for. The best way to do this is to download the CSV template file, open it in Excel (or your spreadsheet handling application of choice), and compare its structure with your own data. In our case, the template file looks like this:

```
ID,yob,gender,handedness
```

As you can see, the columns are in a different order than our source data, and the headers are named differently. We must adapt our source data to fit the format that XNAT expects.

After doing so, here is what our source data now looks like:

```
ID,yob,gender,handedness
50782592,1964,M,R
58259524,1968,M,R
73213384,1964,M,R
79363080,1959,F,R
99657608,1968,M,R
```

Now we are ready to continue the upload process.

Upload Your Data

6. Click "Browse" and select your CSV-formatted spreadsheet file.

7. Click "Upload." The page will refresh and display the data you have selected.



Assuming your column names are properly formatted, the header row of your CSV spreadsheet file will be automatically skipped. If not, your header row will appear as the first row of data. You can remove it by clicking the "Remove" button next to that row.

	COLUMN 0	COLUMN 1	COLUMN 2	COLUMN 3	
0	50782592	1964	M	R	REMOVE
1	58259524	1968	M	R	REMOVE
2	73213384	1964	M	R	REMOVE
3	79363080	1959	F	R	REMOVE
4	99657608	1968	M	R	REMOVE

Project

8. Select a Project to upload to.

9. Click "Save." The page will process your data and reload, displaying the values it finds.

Validate and Recode Your Data As Needed

Browse ▾
New ▾
Upload ▾
Administer ▾
Tools ▾
Help ▾

[TEST2](#)

Please review the records before storing.

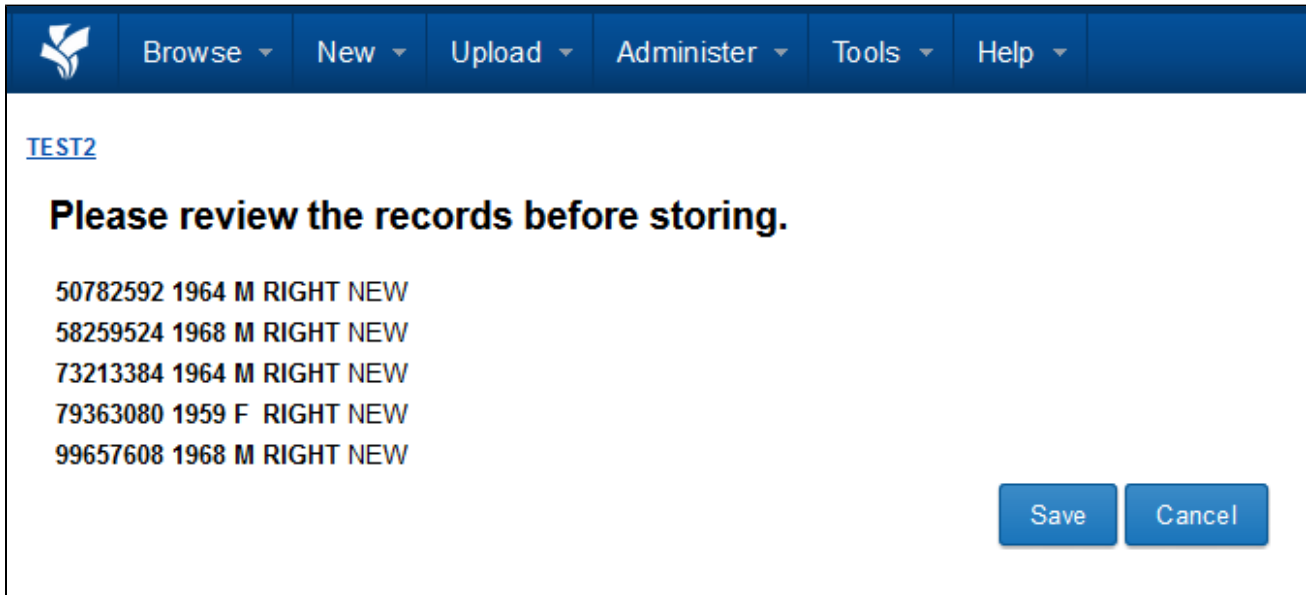
50782592 1964 M R< NEW
58259524 1968 M R< NEW
73213384 1964 M R< NEW
79363080 1959 F R< NEW
99657608 1968 M R< NEW

XNAT can only upload data that is valid for the data attributes you have selected. Any invalid data will be ignored during the upload process. Invalid data is highlighted in red in this review screen. In our case, the value "R" is not an accepted value for the "handedness" attribute. Handedness expects data to be coded as "LEFT" or "RIGHT," so we will have to recode our data and try again.

After recoding, our data now looks like this:

```
ID,yob,gender,handedness
50782592,1964,M,RIGHT
58259524,1968,M,RIGHT
73213384,1964,M,RIGHT
79363080,1959,F,RIGHT
99657608,1968,M,RIGHT
```

And upon uploading this data into XNAT, the red fields have now disappeared in the review screen:



The screenshot shows the XNAT interface with a dark blue navigation bar at the top containing a logo and menu items: Browse, New, Upload, Administer, Tools, and Help. Below the navigation bar, the page title is "TEST2". A large heading reads "Please review the records before storing." Below this heading, a list of records is displayed, each on a new line: "50782592 1964 M RIGHT NEW", "58259524 1968 M RIGHT NEW", "73213384 1964 M RIGHT NEW", "79363080 1959 F RIGHT NEW", and "99657608 1968 M RIGHT NEW". At the bottom right of the review area, there are two blue buttons: "Save" and "Cancel".

Finalize Your Upload

10. Click "Save" on the review screen to finalize your upload. The page will reload and display a success message. You can ensure that your data got properly uploaded and coded by navigating to your project page. In our demo, this page now looks like so:

Test Project 2

Details Access Manage Pipelines

ID: TEST2

Edit Details Delete Manage Custom Variables

Actions

- Add
- Upload Images
- View Prearchive
- Scan Type Cleanup
- Add to Favorites
- Download XML
- Download Images
- Manage Files

Subjects

Add Tab << < prev 1 next > >>

200 1 of 1 Pgs (5 Rows) Reload Options

Subject	M/F	Hand	YOB
50782592	U	R	1964
58259524	U	R	1968
73213384	U	R	1964
79363080	U	R	1959
99657608	U	R	1968

There is a known bug with handling of gender data in the Spreadsheet uploader. The individual subject attributes are correctly noted as "Male" and "Female", but the XSD table display shows "U". See here for issue updates:

[XNAT-1827](#) - Subjects added to XNAT programmatically (REST, csv, etc.) display with 'U' for gender if not entered in lowercase [OPEN](#)

Reupload Data to Modify or Correct Entries

11. Resave modified data in our CSV template. We can resolve the gender coding issue in our data file that results from the unresolved XNAT-1827 issue and reupload our spreadsheet to modify the subject listings we just created. This is a useful process for uploading modified data of any kind. First, we need to recode our subjects' gender values using full words in lowercase, rather than uppercase initials. Do this and resave your CSV document.

```
ID,yob,gender,handedness
50782592,1964,male,RIGHT
58259524,1968,male,RIGHT
73213384,1964,male,RIGHT
79363080,1959,female,RIGHT
99657608,1968,male,RIGHT
```

12. Reupload your modified CSV file

Return to the "Upload > Spreadsheet" page and select the saved CSV upload template that we defined earlier:

[Browse](#) ▾ [New](#) ▾ [Upload](#) ▾ [Administer](#) ▾ [Tools](#) ▾ [Help](#) ▾ [Advanced](#)

Step 1: Select the root data type to be inserted.

Title (This will be used to reload this spreadsheet template at a later date.)

Root Data Type: [Show All](#)

Or, load a saved template.

Wed Feb 20 20:23:22 UTC 2019 [Test Template](#)

Mon Dec 26 16:34:49 UTC 2016 [Oasis Subjects](#)

After uploading your new CSV file and selecting the same project to upload to, your confirmation screen should look like this:

[Browse](#) ▾ [New](#) ▾ [Upload](#) ▾ [Administer](#) ▾ [Tools](#) ▾ [Help](#) ▾ [Advanced](#)

[TEST](#)

Please review the records before storing.

50782592 (XNAT_S00042) 50782592 1964 **male** (M) RIGHT MODIFIED

58259524 (XNAT_S00043) 58259524 1968 **male** (M) RIGHT MODIFIED

73213384 (XNAT_S00044) 73213384 1964 **male** (M) RIGHT MODIFIED

79363080 (XNAT_S00045) 79363080 1959 **female** (F) RIGHT MODIFIED

99657608 (XNAT_S00046) 99657608 1968 **male** (M) RIGHT MODIFIED

Upon saving this modified data and returning to your project home page, your subject listing will now have corrected values for the gender column.



Test Project 2

Details Access Manage Pipelines

ID: TEST2

Edit Details

Delete

Manage Custom Variables

Actions

- Add ▸
- Upload Images
- View Prearchive
- Scan Type Cleanup
- Add to Favorites
- Download XML
- Download Images
- Manage Files
- Project Settings

Subjects ×

Add Tab

<< first < prev 1 next > last >> 1 of 1 Pgs (5 Rows)

Reload

Subject	M/F	Hand	YOB
50782592	M	R	1964
58259524	M	R	1968
73213384	M	R	1964
79363080	F	R	1959
99657608	M	R	1968