Lesson 4: Loading Your Own Data Set

The data sets we have worked with in previous lessons come with Orange installation. Orange can read data from spreadsheet file formats which include tab and comma separated and Excel files. Let us prepare a data set (with school subjects and grades) in Excel and save it on a local disk.

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| | A | | В | С | D | E | F | G |
| 1 | Student | | English | History | Algebra | Physics | Physical | |
| 2 | George | | 22 | 32 | 21 | 46 | 99 | |
| 3 | John | | 91 | 65 | 89 | 11 | 29 | |
| 4 | Thomas | | 51 | 21 | 100 | 100 | 27 | |
| 5 | James | | 9 | 18 | 61 | 90 | 8 | |
| 6 | John | | 93 | 39 | 12 | 17 | 63 | |
| 7 | | | | | | | | |
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In Orange, we can use the File widget to load this data.

| | | | | | | File (| 1) | | | | | | |
|------------|------------------|---------------------------------------------|-------|--------------|-------|---------|--------|--|---------|-----|------|-------|---------------------|
| C F | JRL: | grades-sr | nall | .xlsx | | | | | | | 3 Re | eload | |
| 5 ii Da | nstanc ta has | e(s), 5 feat no target v Double click | /aria | | ttrik | oute(s) | | | | | | | |
| 1 | Englis | sh | N | numeric | fea | ature | | | | | | | |
| 2 | Histo | ry | N | numeric | fea | ature | | | | | | | |
| 3 | Algeb | ora | N | numeric | fea | ature | | | | | | | |
| 4 | Physi | cs | N | numeric | fea | ature | | | | | | | |
| 5 | Physi | cial | N | numeric | fea | ature | | | | | | | |
| 6 | Stude | ent | S | string | me | eta | | | | | | | |
| E | lrowse | document | atic | on data sets | | | Report | | | Арр | bly | | |
| | | | | | | | | | | | | | |

Looks ok. Orange has correctly guessed that student names are character strings and that this column in the data set is special, meant to provide additional information and not to be used for modeling (more about this in the coming lectures). All other columns are numeric features. It is always good to check if Orange read the data correctly. We can connect our File widget with the Data Table widget,



and double click on the Data Table to see the data in the spreadsheet format.

|) 🔴 🔴 | | | Data Table | | | | |
|-------------------------------------------------------------------------------|---|---------|------------|---------|---------|---------|-----------|
| Info | | | | | | | |
| 5 instances (no missing values) | | Student | English | History | Algebra | Physics | Physicial |
| 5 features (no missing values) | 1 | George | 22.000 | 32.000 | 21.000 | 46.000 | 99.000 |
| No target variable. | | John | 91.000 | 65.000 | 89.000 | 11.000 | 29.000 |
| 1 meta attribute (no missing | 3 | Thomas | 51.000 | 21.000 | 100.000 | 100.000 | 27.000 |
| values) | 4 | James | 9.000 | 18.000 | 61.000 | 90.000 | 8.000 |
| | 5 | John | 93.000 | 39.000 | 12.000 | 17.000 | 63.000 |
| Variables | | | | | | | |
| Show variable labels (if present) | | | | | | | |
| Visualize numeric values | • | | | | | | |
| Visualize numeric values | • | | | | | | |
| | • | | | | | | |
| Visualize numeric values Color by instance classes | • | | | | | | |
| Visualize numeric values Color by instance classes | • | | | | | | |
| Visualize numeric values Color by instance classes Selection Select full rows | • | | | | | | |

Nice, everything is here.

We can also use Google Sheets, a free online spreadsheet alternative. Then, instead of finding the file on the local disk, we would enter its URL address to the File widget's URL entry box.

There is more to input data formatting and loading. We can define the type and kind of the data column, specify that the column is a web address of an image, and more. But enough for the first day. If you would like to dive deeper, check out the <u>documentation page</u> <u>on Loading your Data</u>, or <u>a video</u> on this subject.