

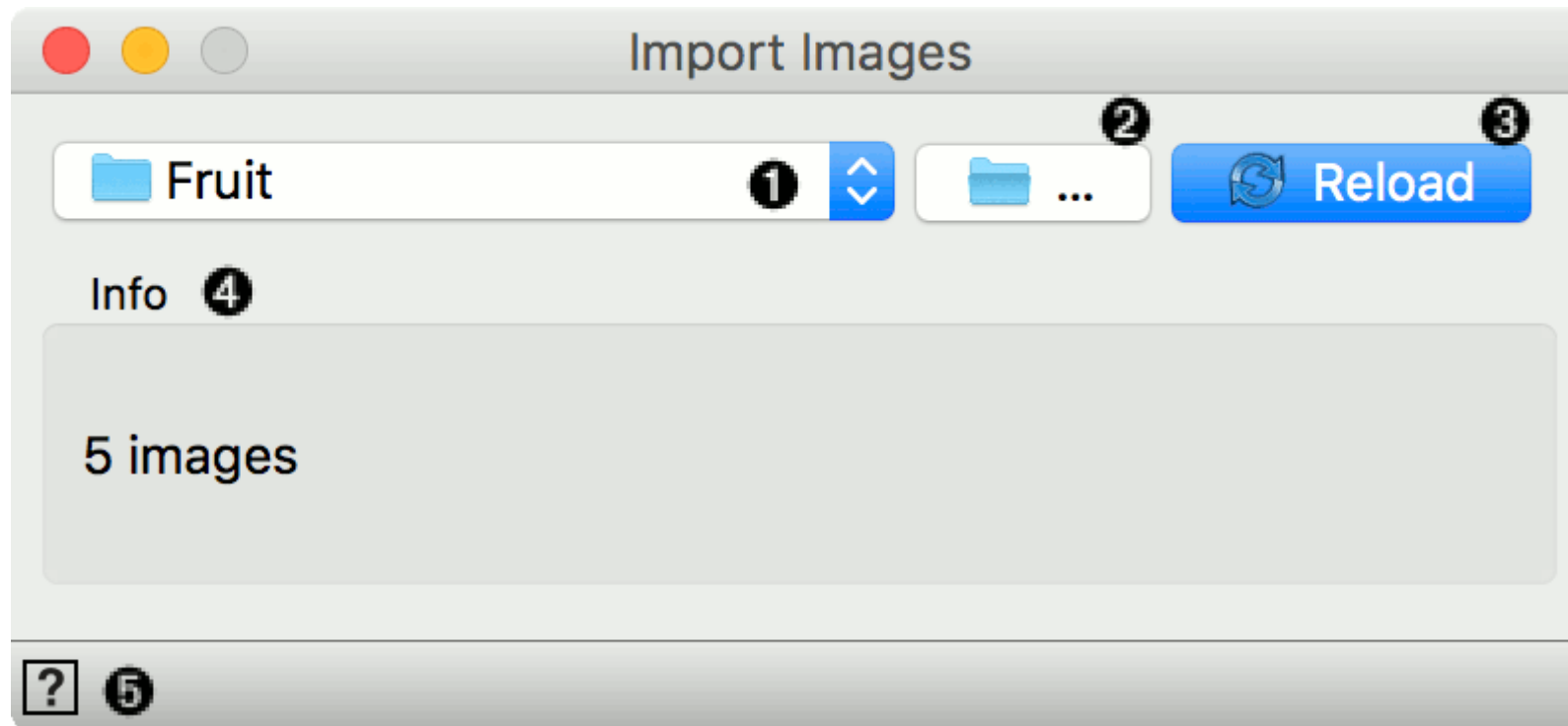
# Import Images

Import images from a directory(s).

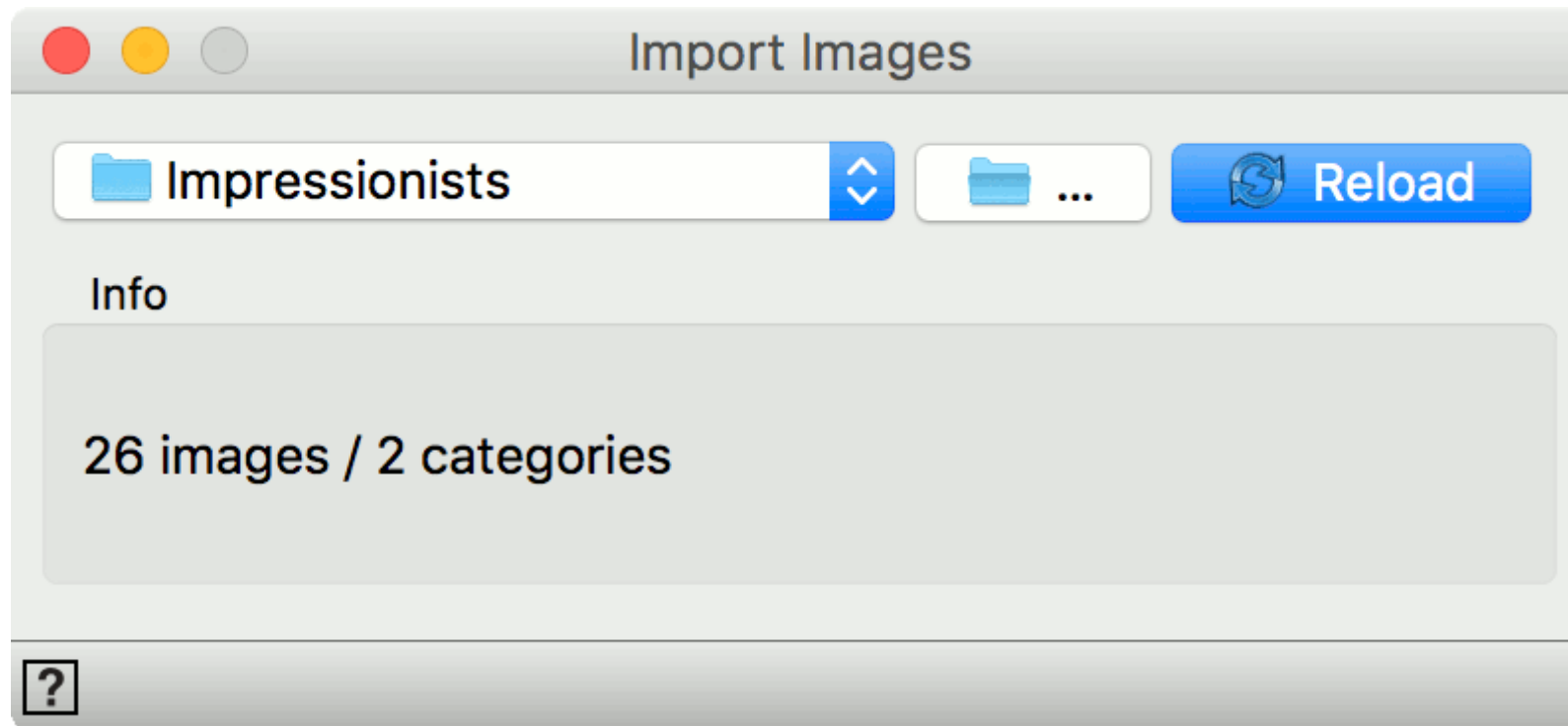
## Outputs

- Data: Dataset describing one image in each row.

**Import Images** walks through a directory and returns one row per located image. Columns include image name, path to image, width, height and image size. Column with image path is later used as an attribute for image visualization and embedding.



1. Currently loaded folder.
2. Select the folder to load.
3. Click *Reload* to update imported images.
4. Information on the input.
5. Access help.



You can load a folder containing subfolders. In this case Orange will consider each folder as a class value. In the example above, **Import Images** loaded 26 images belonging to two categories. These two categories will be used as class values.

## Example

**Import Images** is likely the first widget you will use in image analysis. It loads images and creates class values from folders. In this example we used **Import Images** to load 26 painting belonging to either Monet or Manet.

We can observe the result in a **Data Table**. See how Orange added an extra class attribute with values Monet and Manet?

Now we can proceed with standard machine learning methods. We will send images to **Image Embedding**, where we will use *Painters* embedder to retrieve image vectors.

Then we will use **Test & Score** and **Logistic Regression**, to build a model for predicting the author of a painting. We get a perfect score? How come? It turns out, these were the images the *Painters* embedder was trained on, so a high accuracy is expected.

category	image name	image da/Zacasno/Impre image	size	width	height
10 Monet	Tulin fields i	Monet/Tulin	563108	2536	2044

Discrete class with 2 values (no missing values)  
5 meta attributes (no missing values)

Variables

- ☒ Show variable labels (if present)
- ☐ Visualize numeric values
- ☒ Color by instance classes

Selection

- ☒ Select full row

Restore C...

☒ Send

Import Images

Data Table

Image Embedding

Test & Score

Logistic Regression

Monet	Wild Poppie...	Monet/Wild ...	356167	2536	1826
Monet	The Cliffs at ...	Monet/The C...	559355	1600	1279
Monet	Woman with ...	Monet/Wom...	2122240	1576	2399
Monet	Pont Argent...	Monet/Pont ...	338509	1600	1200
Manet	Music in the ...	Manet/Music...	2126219	3000	1906
Manet	Argenteuil	Manet/Argen...	229376	596	761
Manet	The Balcony	Manet/The B...	164649	655	799
				1280	979
				1257	1024
				1024	764
				2024	1579
				800	599
				2024	1751
				2000	2862
				2511	3304

Image Embedding

Info

Data with 26 instances.  
Connected to server.

Settings

Image attribute:

Embedder:

A model trained to predict painters from artwork images.

☒ Apply Automatically

Test & Score

Sampling

- ☐ Cross validation
  - Number of folds:
  - ☒ Stratified
- ☐ Cross validation by feature
  -
- ☐ Random sampling
  - Repeat train/test:
  - Training set size:
  - ☒ Stratified
  - ☒ Leave one out
  - ☐ Test on train data
  - ☐ Test on test data

Target Class

Evaluation Results

Method	AUC	CA	F1	Precision	Recall
Logistic Regression	1.000	1.000	1.000	1.000	1.000

