Python Docstrings

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Docstrings

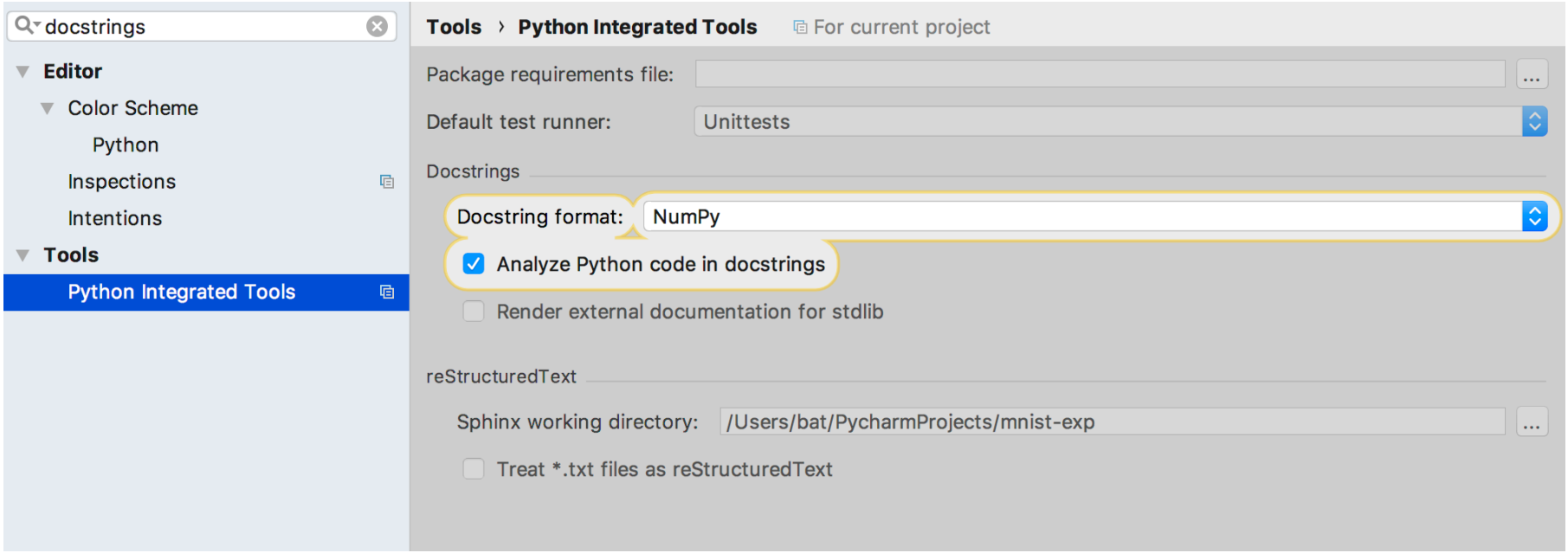
- Strings used for code documentation
- Enable automatic generation of docs in different formats (HTML, etc.)
- Different formats for Python
  - numpydoc
  - ...

Required Packages

- In our practical sessions, we will use
  - **sphinx**: to automatically generate the documentation from code docstrings
  - **numpydoc**: as our standard to format our docstrings
    - https://numpydoc.readthedocs.io/en/latest/
  - **sphinx_rtd_theme:** HTML popular theme for docs

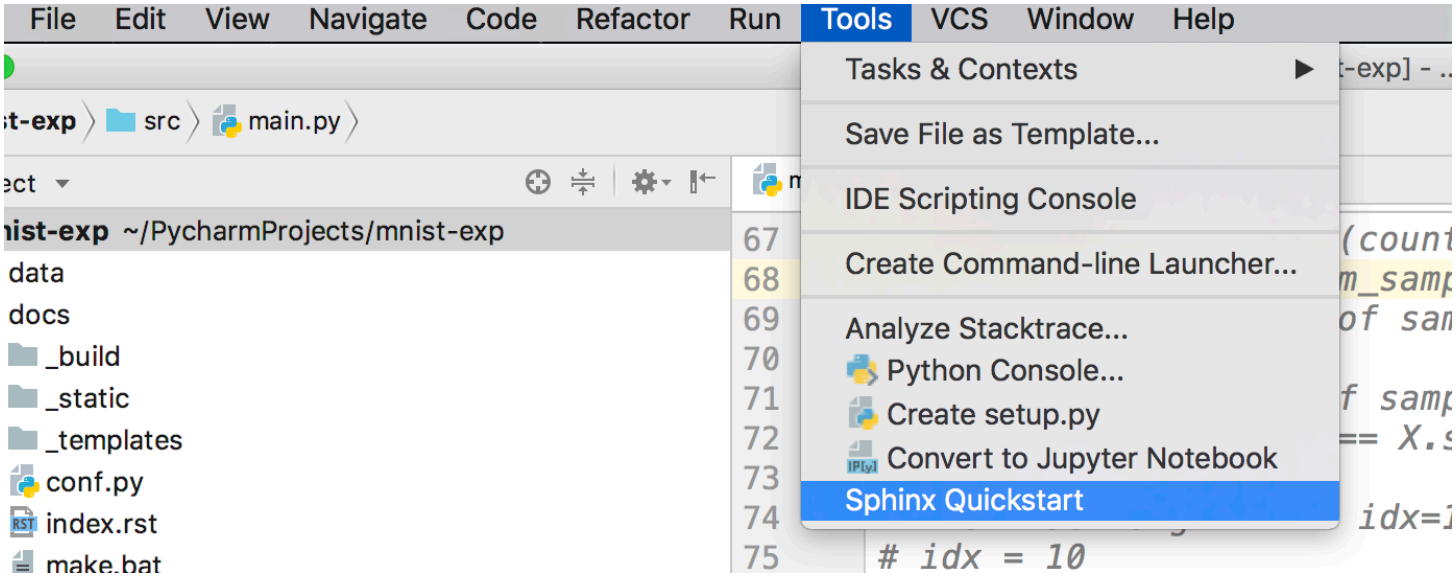
Configuring PyCharm

- Step 1: Set numpydoc as the default docstring format



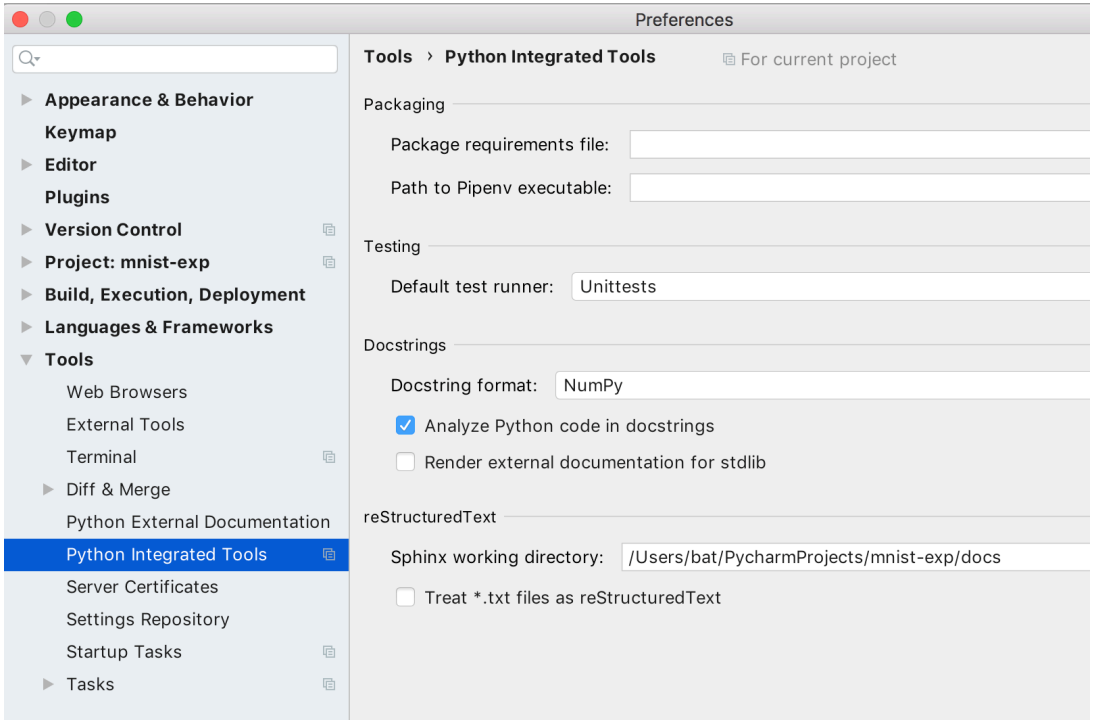
Configuring PyCharm

- Step 2: Set-up Sphinx configuration



Sphinx Quickstart

- Automatically configures sphinx environment
  - Set sphinx working directory «docs»
- Suggested preferences:
  - Do not separate source and build



Sphinx Quickstart

- The summary of your configuration is stored in **conf.py**
  - Set path to your src folder

```
# -- Path setup --------------
import os
import sys
sys.path.insert(0, os.path.abspath('../src/'))
```

  - To use the sphinx rtd theme, set:

```
html_theme = 'sphinx_rtd_theme'
```

  - Add autodoc extension:

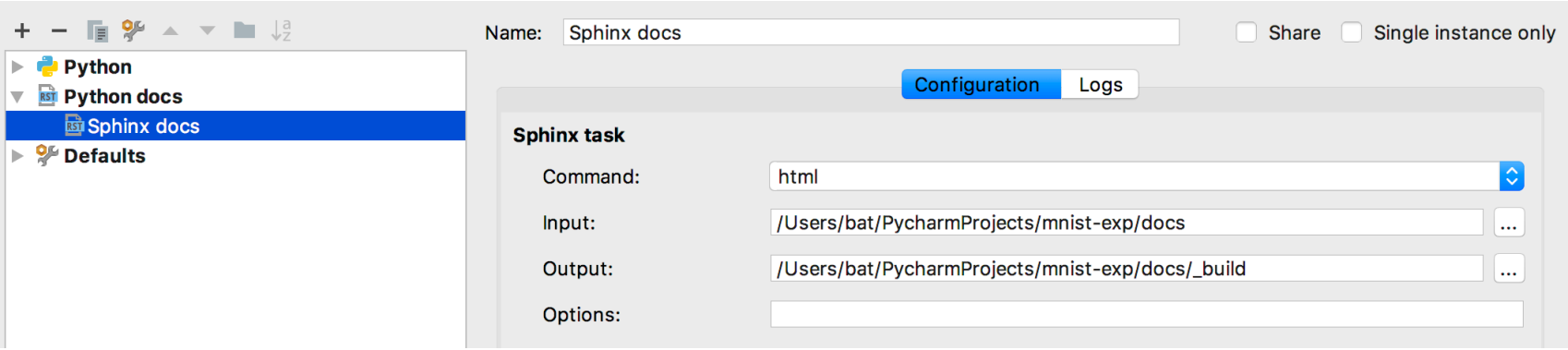
```
extensions = ['sphinx.ext.autodoc']
```

- **Index.rst** contains the name of the modules to be included
  - To add ours, let's just add the following commands into that file

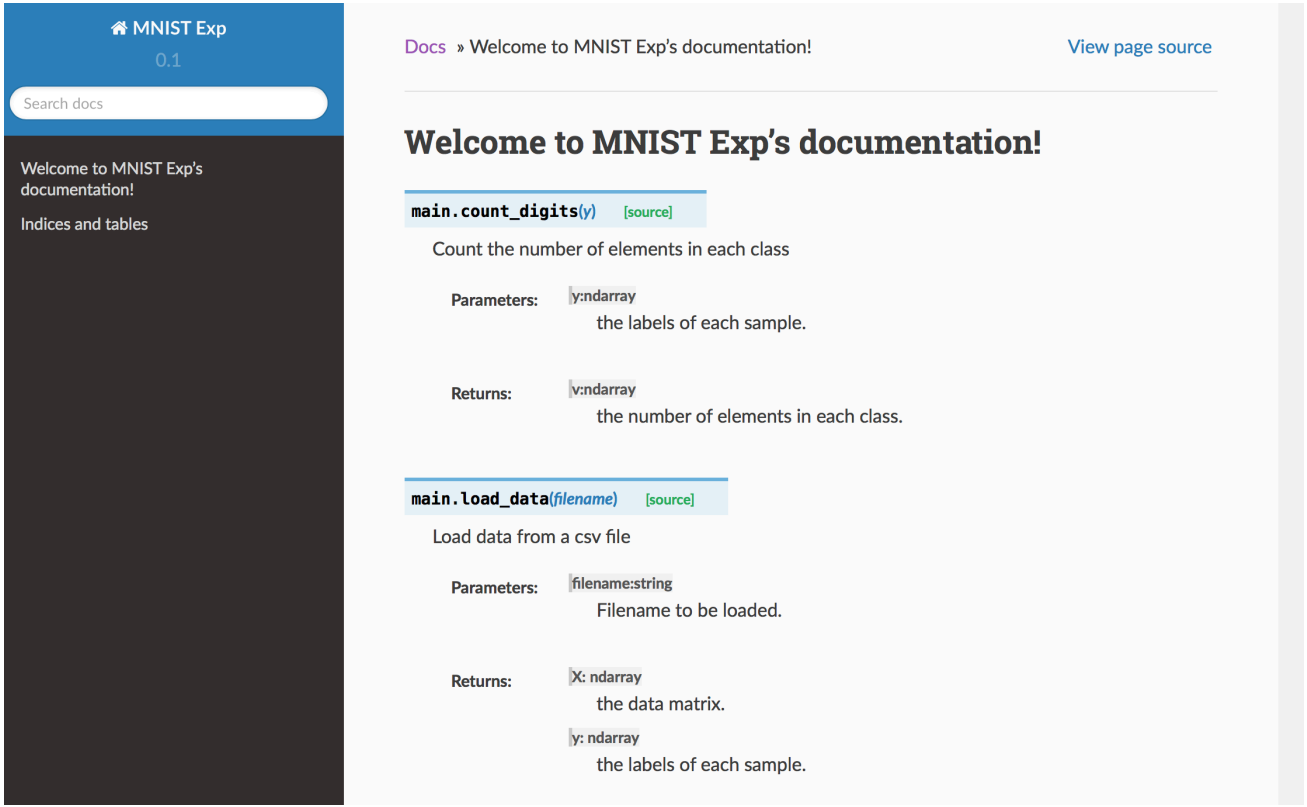
```
.. automodule:: your_file_or_package_name
   :members:
   :undoc-members:
```

Run Configuration for Sphinx docs in PyCharm

- Run → Edit Configurations
- Create a configuration 'Sphinx docs' from the defaults
- Set Input and Output folder
  - Output is just input_folder/_build



Finally…


MNIST Exp
0.1
Search docs
Welcome to MNIST Exp's documentation!
Indices and tables
Docs » Welcome to MNIST Exp's documentation!
View page source
Welcome to MNIST Exp's documentation!
main.count_digits(y) [source]
Count the number of elements in each class
Parameters: y:ndarray
the labels of each sample.
Returns: v:ndarray
the number of elements in each class.
main.load_data(filename) [source]
Load data from a csv file
Parameters: filename:string
Filename to be loaded.
Returns: X: ndarray
the data matrix.
y: ndarray
the labels of each sample.