

Stone Soup Tutorial Preparation

Installation

For those who already have Python/Jupyter, and if you are familiar with Python/Jupyter, you can install Stone-Soup directly via *pip*, or *conda*, as applicable. E.g.:

```
python -m pip install stonessoup
```

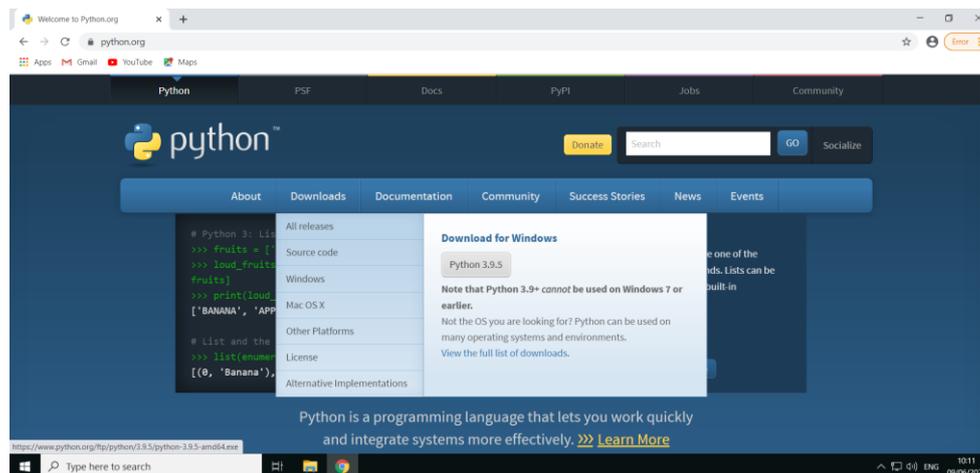
or

```
conda config --add channels conda-forge
```

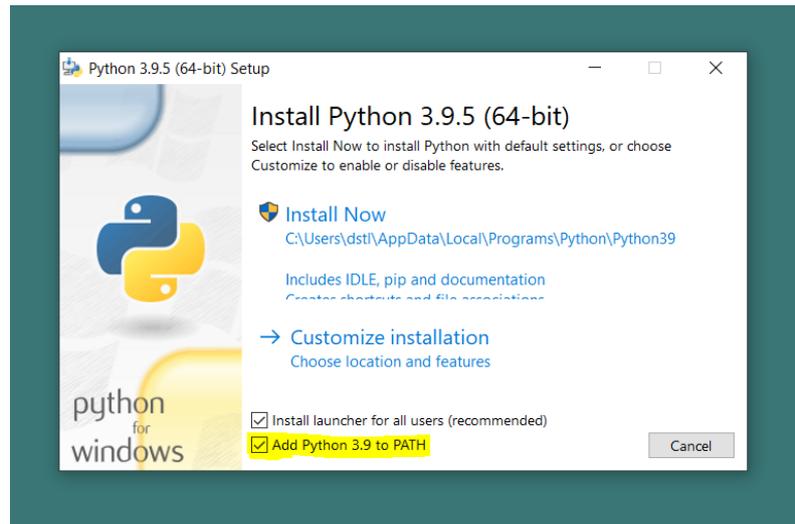
```
conda install stonessoup
```

For those unfamiliar with Python, instructions are below for setting up on Windows.

1. First download Python from <http://www.python.org>



- When then running installer, ensure to enable the “Add Python to PATH” option, highlighted below.



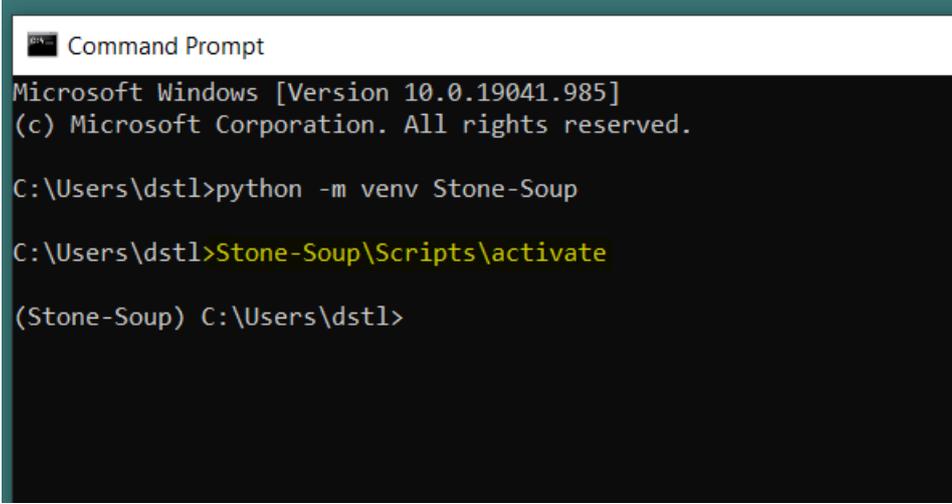
- Once installed, open a command window, and run: `python -m venv Stone-Soup`. This will create a virtual environment for installing Stone Soup.

```
Command Prompt
Microsoft Windows [Version 10.0.19041.985]
(c) Microsoft Corporation. All rights reserved.

C:\Users\dstl>python -m venv Stone-Soup

C:\Users\dstl>
```

- Next activate the virtual environment by running: `Stone-Soup\Scripts\activate`



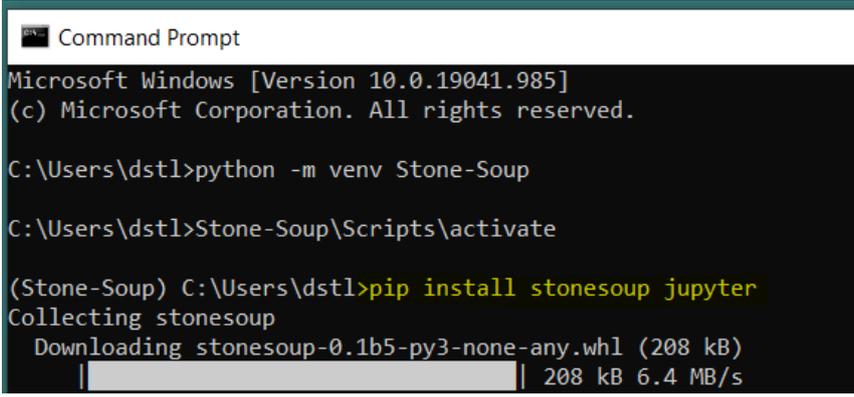
```
Command Prompt
Microsoft Windows [Version 10.0.19041.985]
(c) Microsoft Corporation. All rights reserved.

C:\Users\dstl>python -m venv Stone-Soup

C:\Users\dstl>Stone-Soup\Scripts\activate

(Stone-Soup) C:\Users\dstl>
```

- With the environment activated, now install Stone Soup, and Jupyter for using the notebooks, with: `pip install stonessoup jupyter`



```
Command Prompt
Microsoft Windows [Version 10.0.19041.985]
(c) Microsoft Corporation. All rights reserved.

C:\Users\dstl>python -m venv Stone-Soup

C:\Users\dstl>Stone-Soup\Scripts\activate

(Stone-Soup) C:\Users\dstl>pip install stonessoup jupyter
Collecting stonessoup
  Downloading stonessoup-0.1b5-py3-none-any.whl (208 kB)
    |-----| 208 kB 6.4 MB/s
```

6. With everything installed, you can now run Jupyter with: `python -m jupyter notebook`. This should open the Jupyter environment in your web browser.

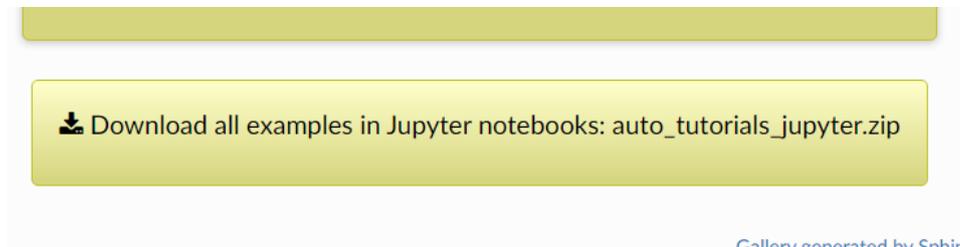
```
Command Prompt - python -m jupyter notebook
Successfully installed MarkupSafe-2.0.1 Send2Trash-1.5.0 ar
.2.0 bleach-3.3.0 cffi-1.14.5 colorama-0.4.4 cycler-0.10.0
5.5 ipython-7.24.1 ipython-genutils-0.2.0 ipywidgets-7.6.3
er-client-6.1.12 jupyter-console-6.4.0 jupyter-core-4.7.1 j
1.3.1 matplotlib-3.4.2 matplotlib-inline-0.1.2 mistune-0.8.
1.5.1 notebook-6.4.0 numpy-1.20.3 packaging-20.9 pandocfilt
us-client-0.11.0 prompt-toolkit-3.0.18 pycparser-2.20 pygme
hon-dateutil-2.8.1 pywin32-301 pywinpty-1.1.1 pyzmq-22.1.0
b-0.2.2 scipy-1.6.3 six-1.16.0 stonessoup-0.1b5 terminado-0.
idth-0.2.5 webencodings-0.5.1 widgetsnbextension-3.5.1
WARNING: You are using pip version 21.1.1; however, version
You should consider upgrading via the 'c:\users\dstl\stone-
.
(Stone-Soup) C:\Users\dstl>python -m jupyter notebook
[I 10:54:24.879 NotebookApp] Writing notebook server cookie
book_cookie_secret
[I 10:54:26.429 NotebookApp] Serving notebooks from local d
```

Once installed, you can run up the Jupyter/Stone Soup environment again, just by using steps 4. and 6.

Stone Soup Notebooks

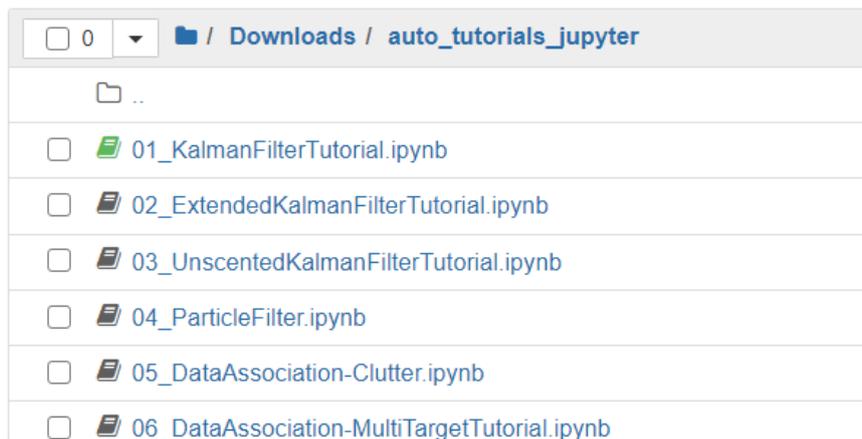
The Stone Soup tutorial notebooks can be downloaded from <https://stonesoup.rtfid.io>, where there should be *tutorials* option on the left hand side menu.

At the bottom of the page, you should find a *download all examples in Jupyter notebooks* option:



Extract out the ZIP file once download, and via Jupyter, browse to the folder via Jupyter interface in the web browser.

Select items to perform actions on them.



Click on one of the tutorials, and click the double right arrows (highlighted below) to restart and run all the cells in the notebook. A number of plots should be produced. This will confirm everything is working.

