$$F(a, b) = \frac{1}{\sqrt{a}} \int\limits_{-\infty}^{+\infty} f(t)\, \psi^* \left(\frac{t - b}{a} \right) dt$$

Required Packages of Python Wavelet Transforms

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Objective

- glance over PyWavelets and other packages required for this whole course series, i.e. this fundamental wavelet course and the future practicle wavelet courses.

1. Packages Required

The main library required is PyWavelets

- PyWavelets has dropped support for Python 3.5 and 3.6 and now supports Python 3.7-3.10.
- PyWavelets is only dependent on NumPy (supported versions are currently >= 1.14.6).
- SciPy is also an optional dependency.
  - When present, FFT-based continuous wavelet transforms will use FFTs from SciPy rather than NumPy.

Besides, Jupyter notebook, Pandas and Matplotlib are required for the course series.

All these packages are preinstalled in the Anaconda Python, so you need not install anything.

2. Install Pywavelet

From PyPI

```
In [ ]: pip install PyWavelets
```

Install pre-built binaries from the main or conda-forge channel

```
In [ ]: conda install pywavelets
```

```
In [ ]: conda install -c conda-forge pywavelets
```

3. Install required packages

From PyPI

```
In [ ]: pip install numpy scipy pandas matplotlib notebook
```

Install pre-built binaries from the main or conda-forge channel

```
In [ ]: conda install numpy scipy pandas matplotlib notebook
```

```
In [ ]: conda install -c conda-forge numpy scipy pandas 0matplotlib notebook
```