Jupyter kernel installation
Installation guide

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Introduction

The WPS plugin to Jupyter (a Jupyter kernel) enables the features of WPS Analytics to be used in a Jupyter notebook.

To use the WPS Jupyter kernel, you must have Python and the Jupyter modules installed. You can either install the Jupyter modules into an existing Python environment, or install a packaged Python environment such as Anaconda that includes the necessary modules.

This document does not cover how to install Python or Jupyter. We assume that you are familiar with Python and Jupyter, and know how to install Python packages, building from source code if necessary.

Installing the WPS Analytics kernel (Microsoft Windows)

Steps to take to install the WPS Analytics Jupyter kernel on Microsoft Windows.

You must have Python installed (see the Python website for information), and a working JupyterLab or Jupyter Notebook installation (see the Jupyter website for information).

Once you have a working Jupyter environment, the files required to make the WPS Analytics kernel available are included in the WPS Analytics installer, available from the World Programming website.

1. Ensure the Python installation directory has been added to your *PATH* variable.

2. Download the WPS Analytics installation (.msi) file and when complete, double-click the file. Read and accept the end user agreement, and follow the on-screen instructions. After installation, apply your WPS licence.

3. Ensure that the *WPSHOME* environment variable is set to point to the WPS installation directory (for example, `C:\Program Files\World Programming\WPS Analytics\4`).

4. Create a folder called `WPS Analytics` for the WPS Analytics kernel:

   - If Jupyter is installed for a single user, create a `WPS` folder in `C:\Users\<userid>\AppData\Roaming\jupyter\kernels`

   - If Jupyter is installed for all users,create a `WPS` folder in `C:\ProgramData\jupyter\kernels`

   You may need to create one of, or both, the `jupyter` and `kernels` folders in the path.

5. Copy the content of the `jupyter` folder in the WPS Analytics installation directory in to the `WPS` folder.

6. In the `kernel.json` file, edit the first string on the "argv" line to reference the `wpsjkrnl` file in the WPS Analytics installation directory, for example `"C:/program files/World Programming/WPS Analytics/4/bin/wpsjkrnl"`.

   Note:

   Do not use a single backslash (`\`) as the path delimiter in the string as this is interpreted by Python as the escape character. Use either a forward slash (`/`) or an escaped backslash (`\\`) as the path delimiter in the string.

Installing the WPS Analytics kernel (Linux)

You must have Python installed (see the Python website for information), and a working JupyterLab or Jupyter Notebook installation (see the Jupyter website for information).

Once you have a working Jupyter environment, the files required to make the WPS Analytics kernel available are included in the WPS Analytics distribution, available from the World Programming website.

1. Download the distribution file and choose a suitable installation location to which you have write-access. Change to that directory and extract WPS Analytics using the following command:

   ```
   tar -xzof <installation-file>.tar.gz
   ```

2. Apply the licence key using the following command:

   ```
   <installation-dir>/bin/wps -stdio -setinit < <wps-key-file>
   ```

3. Create a folder called `WPS` for the WPS Analytics kernel:

   - If Jupyter is installed for a single user, create the `WPS` folder in `~/.local/share/jupyter/kernels`

   - If Jupyter is installed for all users, create the `WPS` folder in `/usr/share/jupyter/kernels`

   You might need to create the `jupyter/kernels` folder path.

4. Copy the content of the `jupyter` folder in the WPS Analytics installation directory in to the `WPS` folder.

5. In the `kernel.json` file, edit the first string on the "argv" line to reference the `wpsjkrnl` file in the WPS Analytics installation directory, for example `"/opt/worldprogramming/wps-4/bin/wpsjkrnl"`.

Installing the WPS Analytics kernel (macOS)

You must have Python installed (see the Python website for information), and a working JupyterLab or Jupyter Notebook installation (see the Jupyter website for information).

Once you have a working Jupyter environment, the files required to make the WPS Analytics kernel available are included in the WPS Analytics distribution, available from the World Programming website.

1. Download the distribution file and choose a suitable installation location to which you have write-access.

2. Open the download folder containing the file and double-click the downloaded file. A Finder window opens, through which the content of the .dmg file is made available.

3. Drag the application WPS.app from the .dmg window into your system's Applications folder. To do this you might need to enter an administrator password.

4. Start a Terminal window. The Terminal application is located in the Utilities folder of the Applications folder.

5. In the Terminal window, enter the following command:

   ```
   sudo /Applications/WPS.app/Contents/MacOS/wps –setinit /Users/user-name/
   Downloads/<wps-key-file>
   ```
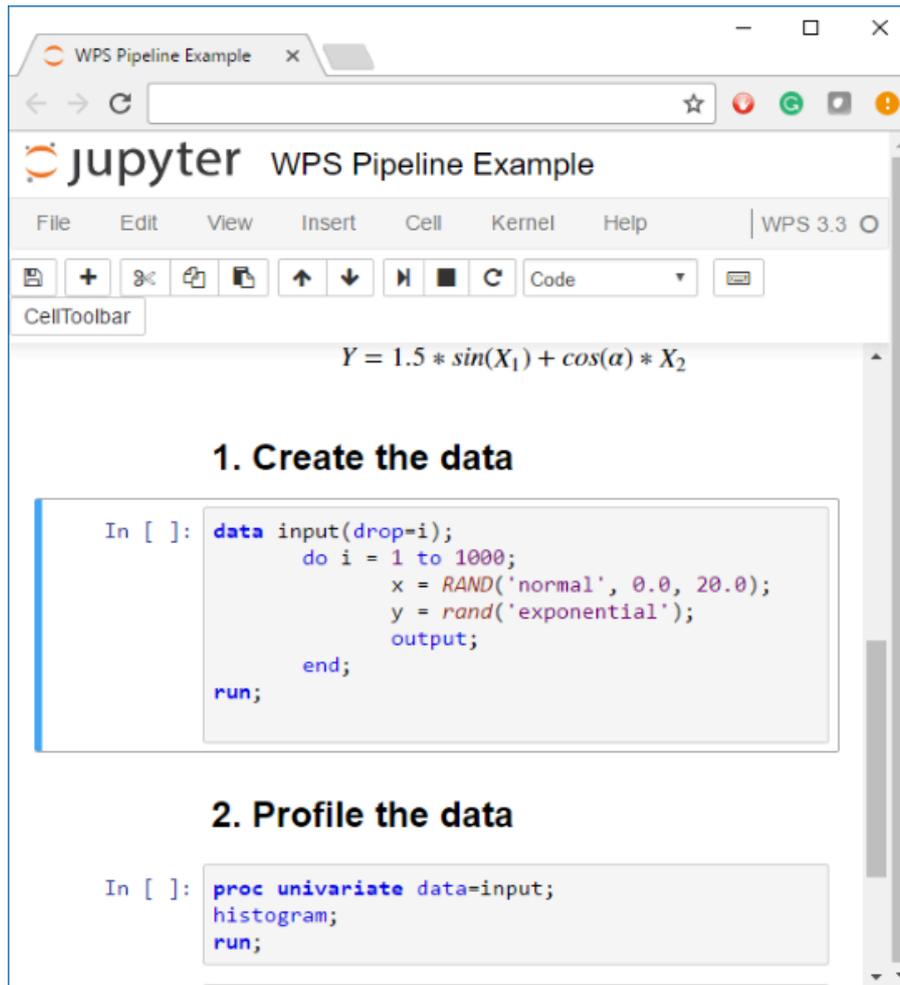
6. Create a folder called `WPS` for the WPS Analytics kernel:

   • If Jupyter is installed for a single user, create the `WPS` folder in `~/Library/Jupyter/kernels`

   • If Jupyter is installed for all users, create the `WPS` folder in `/usr/share/jupyter/kernels`

   You might need to create the `jupyter/kernels` folder path.

7. Copy the content of the `jupyter` folder in the WPS Analytics installation directory in to the `WPS` folder.

8. In the `kernel.json` file, edit the first string on the "argv" line to reference the `wpsjkrnl` file in the WPS Analytics installation directory, for example `"/Applications/WPS.app/Contents/MacOS/wpsjkrnl"`.

Using WPS in a Jupyter notebook

In the Jupyter home page, you will have the option to create a new notebook of type WPS:
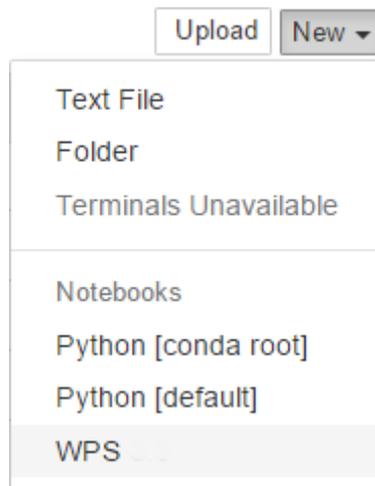
Select WPS. A new notebook is created in to which a SAS language program can be written:

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WPS includes software developed by third parties. More information can be found in the THANKS or acknowledgments.txt file included in the WPS installation.