World Programming
An ALTAIR Company

Altair SLC Jupyter kernel

Installation guide

Version: 2023.6

www.altair.com

Contents

Introduction

The Altair SLC plugin to Jupyter (a Jupyter kernel) enables the features of Altair SLC to be used in JupyterLab or a Jupyter Notebook.

To use the Altair SLC 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 Altair SLC kernel (Microsoft Windows)

Steps to install the Altair SLC 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 Altair SLC kernel available are included in the Altair SLC installer, available from the Altair One marketplace.

1. Download the installation application and follow the instructions to install and license Altair SLC in the installation guide.
2. Create a folder called `WPS` for the Altair SLC kernel:
   - If Jupyter is installed for a single user, create the `WPS` folder in `C:\Users\<userid>\AppData\Roaming\jupyter\kernels`
   - If Jupyter is installed for all users,create the `WPS` folder in `C:\ProgramData\jupyter\kernels`

   You may need to create one of, or both, the `jupyter` and `kernels` folders in the path.
3. Copy the content of the `jupyter` folder in the Altair SLC installation directory in to the `WPS` folder.
4. In the `kernel.json` file, edit the first string on the "argv" line to reference the `wpsjkrnl` file in the Altair SLC installation directory, for example `"C:/program files/World Programming/WPS/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 Altair SLC kernel (Linux)

Steps to install the Altair SLC Jupyter kernel on 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 Altair SLC kernel available are included in the Altair SLC distribution, available from the Altair One marketplace.

1. Download the installation application and follow the instructions to install and license Altair SLC in the installation guide.
2. Create a folder called `WPS` for the Altair SLC 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.
3. Copy the content of the `jupyter` folder in the Altair SLC installation directory in to the `WPS` folder.
4. In the `kernel.json` file, edit the first string on the "argv" line to reference the `wpsjkrnl` file in the Altair SLC installation directory, for example `"/opt/worldprogramming/wps/bin/wpsjkrnl"`.

Installing the Altair SLC kernel (macOS)

Steps to install the Altair SLC Jupyter kernel on 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).

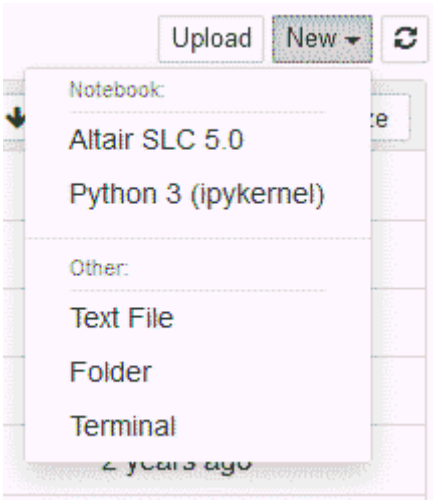
Once you have a working Jupyter environment, the files required to make the Altair SLC kernel available are included in the Altair SLC distribution, available from the Altair One marketplace.

1. Download the installation application and follow the instructions to install and license Altair SLC in the installation guide.
2. Create a folder called `WPS` for the Altair SLC 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`

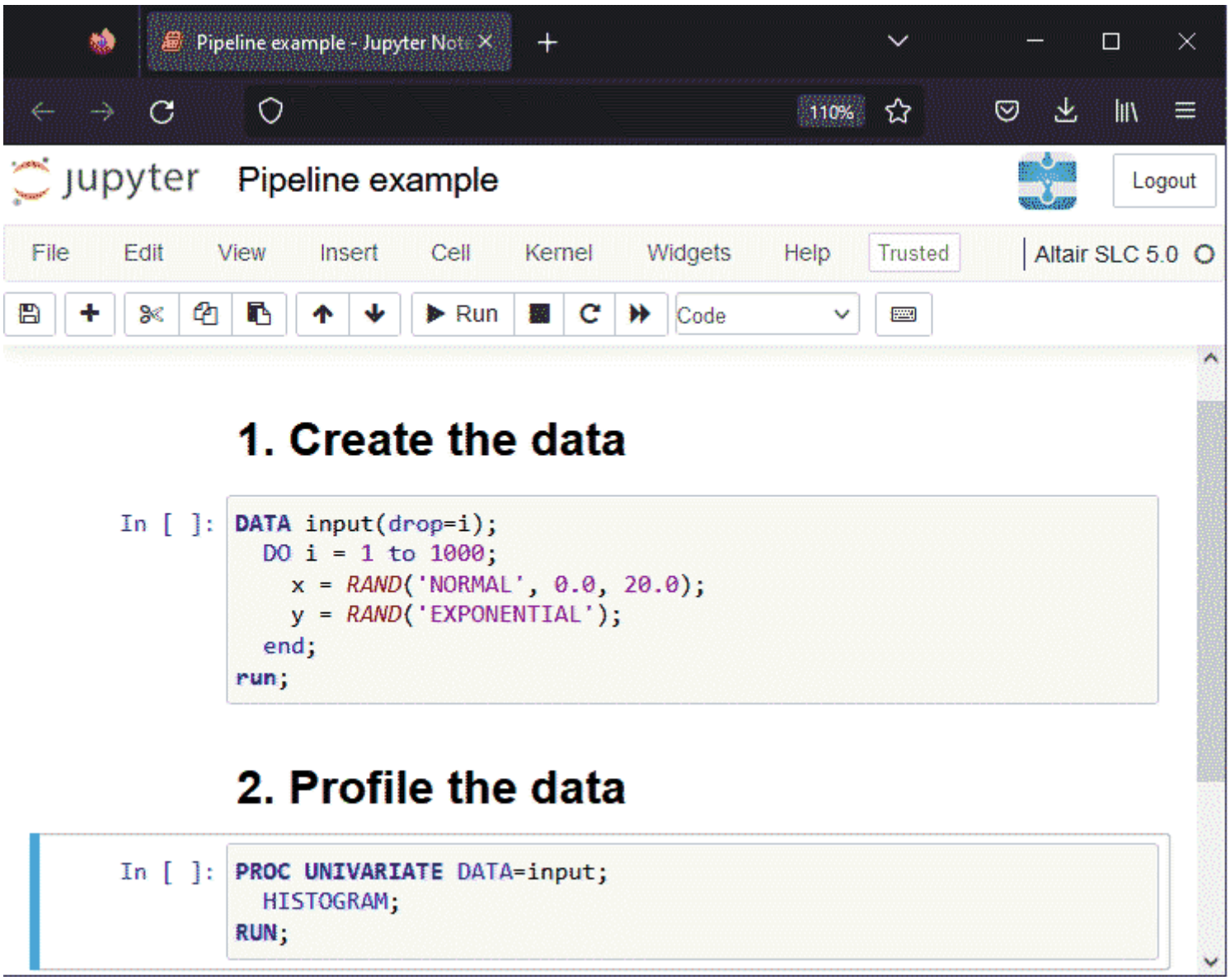
   You might need to create the `jupyter/kernels` folder path.
3. Copy the content of the `jupyter` folder in the Altair SLC installation directory in to the `WPS` folder.
4. In the `kernel.json` file, edit the first string on the "argv" line to reference the `wpsjkrnl` file in the Altair SLC installation directory, for example `"/Applications/WPS.app/Contents/MacOS/wpsjkrnl"`.

Using Altair SLC in a Jupyter notebook

In the Jupyter home page, you will have the option to create a new notebook of type Altair SLC:



Select Altair SLC. A new notebook is created in to which a SAS language program can be written:


Pipeline example - Jupyter Not
110%
jupyter
Pipeline example
Logout
File
Edit
View
Insert
Cell
Kernel
Widgets
Help
Trusted
Altair SLC 5.0
Run
Code
1. Create the data
In [ ]:
DATA input(drop=i);
DO i = 1 to 1000;
x = RAND('NORMAL', 0.0, 20.0);
y = RAND('EXPONENTIAL');
end;
run;
2. Profile the data
In [ ]:
PROC UNIVARIATE DATA=input;
HISTOGRAM;
RUN;

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Altair Engineering, inc. is not associated in any way with the SAS Institute.

Altair SLC is not the SAS System.

The phrases "SAS", "SAS language", and "language of SAS" used in this document are used to refer to the computer programming language often referred to in any of these ways.

The phrases "program", "SAS program", and "SAS language program" used in this document are used to refer to programs written in the SAS language. These may also be referred to as "scripts", "SAS scripts", or "SAS language scripts".

The phrases "IML", "IML language", "IML syntax", "Interactive Matrix Language", and "language of IML" used in this document are used to refer to the computer programming language often referred to in any of these ways.

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