# Using JupyterLab for scripting (Python focus)

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# About Me

- Mathematics Major, SFU
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# How do I use JupyterLab in my work

- Jupyter notebooks for data exploration, testing functions, visualizing data
- Once I finalize functions - save them in a .py Python script
- Write Shell scripts to run Python script and test within JupyterLab terminal


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# Tell me about you

- Name
- What you do
- One challenge you face in your work
- What you hope to learn from this workshop


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# What is JupyterLab

- JupyterLab is a next-generation web-based user interface for Project Jupyter
- JupyterLab enables you to work with documents and activities such as Jupyter notebooks, text editors, terminals in a flexible, integrated, and extensible manner
- `https://jupyterlab.readthedocs.io/en/stable/getting_started/overview.html`


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# What languages are compatible with JupyterLab

A wide variety: from R to Python, to Julia, Ruby .... You can find a list of all kernels you can install here

`https://github.com/jupyter/jupyter/wiki/Jupyter-kernels`.

In this workshop we will use the Python Kernel.


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# What we are going to do today

- Explore the JupyterLab framework
- Use provided notebook to write a Python script that plots subsets of data obtained from Statistics Canada
- Test script using terminal within the JupyterLab framework
- Have fun exploring the data!


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# Time to practice

(UBUNTU) Open a terminal and type "jupyter lab"
(MacOS) Open a terminal and type "jupyter lab"
(Windows) Open the conda terminal (Windows + R, cd into Anaconda scripts, conda). Type "jupyter lab"


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- In this workshop we explored JupyterLab
- Played with a Jupyter notebook
- Transformed exploratory code into a reusable Python script

(and learned a few scripting tricks on the way!)


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