Jupyter Notebooks

ICPSR

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Agenda

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ICPSR

➢ Research data management organization over 55 years
➢ Hosts archives for various national agencies
➢ Globally Recognized Curation Methodologies
➢ Enabling secondary use of research data
➢ Research and development of new data management technologies
Our Organization

- Primary Research Staff
- Professional curation staff
- Data Librarians and Archivists
- Web and Social Media content designers
- Software Solution Architects, designers and developers
- Cloud and On-Premise Infrastructure Staff
Interactive Python > Jupyter

➢ Website: http://jupyter.org/
➢ IPython created in 2001 as an interactive computing in multiple languages
➢ Jupyter is a spinoff started in 2014

The Jupyter Notebook is an open-source web application that allows you to create and share documents that contain live code, equations, visualizations and narrative text. Uses include: data cleaning and transformation, numerical simulation, statistical modeling, data visualization, machine learning, and much more.
**Jupyter Lab**

JupyterLab is the next-generation user interface for Project Jupyter. It offers all the familiar building blocks of the classic Jupyter Notebook (notebook, terminal, text editor, file browser, rich outputs, etc.) in a flexible and powerful user interface. Eventually, JupyterLab will replace the classic Jupyter Notebook after JupyterLab reaches 1.0.
Jupyter Hub

With JupyterHub you can create a multi-user Hub which spawns, manages, and proxies multiple instances of the single-user Jupyter notebook server. Project Jupyter created JupyterHub to support many users. The Hub can offer notebook servers to a class of students, a corporate data science workgroup, a scientific research project, or a high performance computing group.
nbviewer & Notebook Galleries

https://nbviewer.jupyter.org/

IPython Notebook Viewer is a free web service that allows you to share static html versions of hosted notebook files. If a notebook is publicly available, by giving its url to the Viewer, you should be able to view it.
Demo

https://github.com/jakevdp/PythonDataScienceHandbook
ICPSR Use Cases

➢ Download data, documentation and live code that is ready to consume by ICPSR users.
➢ Publish Jupyter Notebook version of publications making the code, and graphics interactive.
➢ Host Jupyter Hub for member organizations. Allowing researchers to start data analysis with few clicks.
ICPSR Notebook Gallery

A sample gallery is available in GitHub

https://github.com/ICPSR/mybinder_test
What’s next?

R & Python notebooks available for download

Gallery of popular articles and publications

Jupyter Hub on cloud for member organizations
Thank You

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