

Create and Share Analytics with Jupyter Notebooks

GETTING STARTED WITH JUPYTER NOTEBOOKS



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Overview

Introducing Jupyter notebooks

The history of IPython and Jupyter

**Installing Jupyter notebooks on
Windows and MacOS**

**Jupyter notebooks and the Anaconda
distribution of Python**

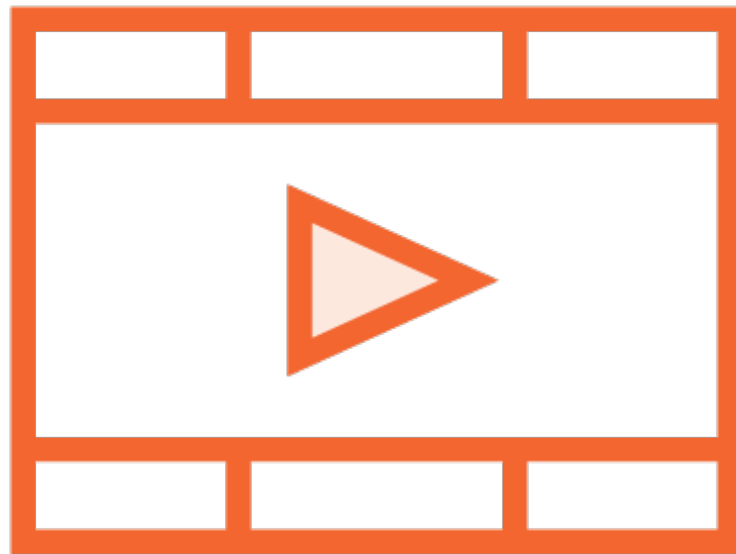
Jupyter notebooks and pip

**Jupyter notebooks and Docker
containers**

Enabling and running JupyterLab

Prerequisites and Course Outline

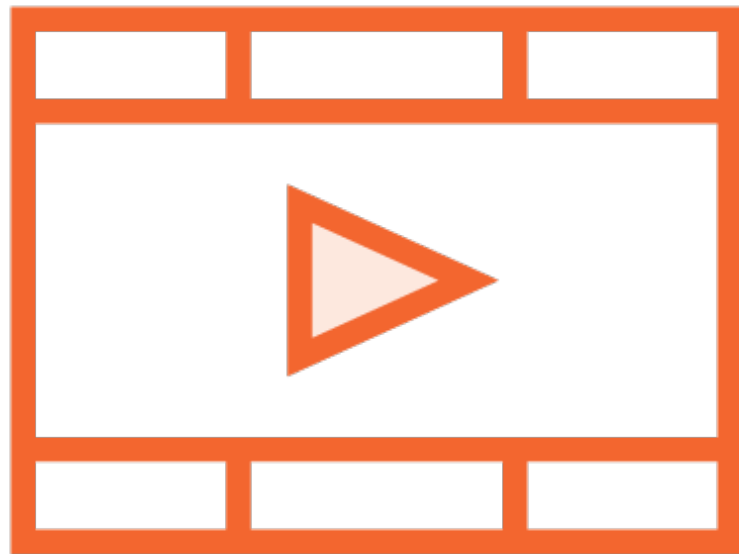
Prerequisites



Very basic Python programming

**Comfortable installing software on
your local machine**

Prerequisites



Python Fundamentals

Course Outline



Getting started with Jupyter notebooks

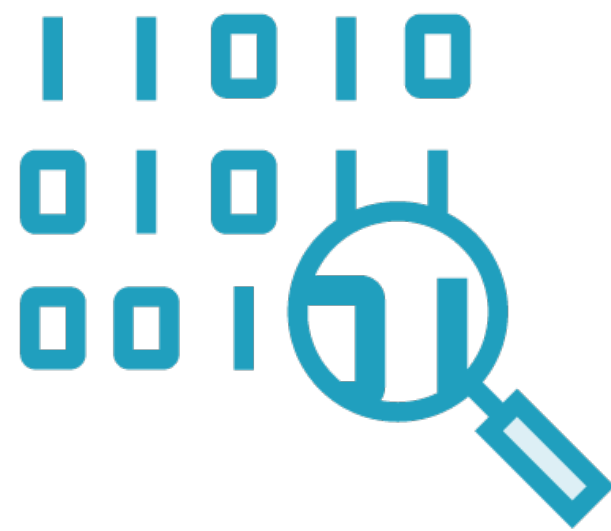
Working with Jupyter notebooks

Creating shareable analysis in Jupyter notebooks

Working with cloud-hosted Jupyter notebooks

Jupyter Notebooks and Python

Thoughtful, Fact-based Point of View



Fact-based

Built with
painstakingly
collected data



Thoughtful

Balanced, weighing
pros and cons



Point of View

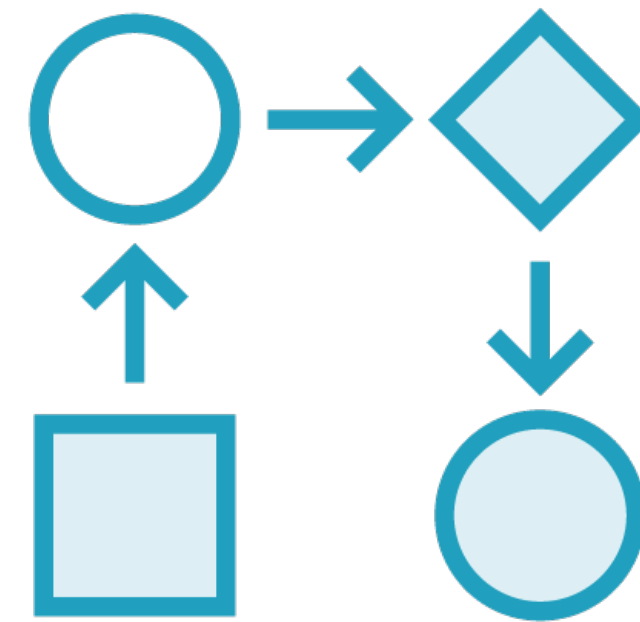
Prediction,
recommendation,
call to action

Two Hats of a Data Professional



Find the Dots

Identify important elements in a dataset



Connect the Dots

Explain those elements via relationships with other elements

Python on Jupyter notebooks has
dramatically democratized analytics

Jupyter Notebook

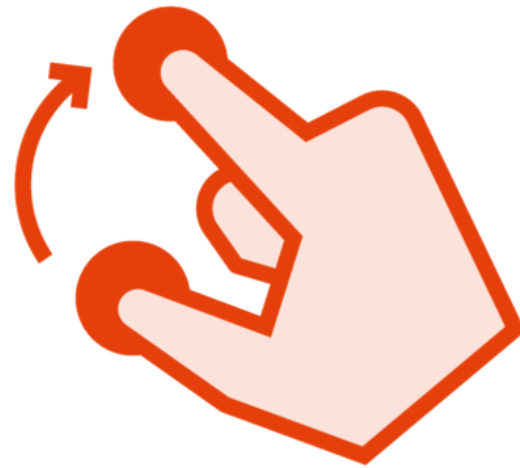
Open-source web application that allows interactive development in Python and several other languages.

Python on Jupyter



Accessible

Web-based and free -
no cost or installation
hassle



Interactive

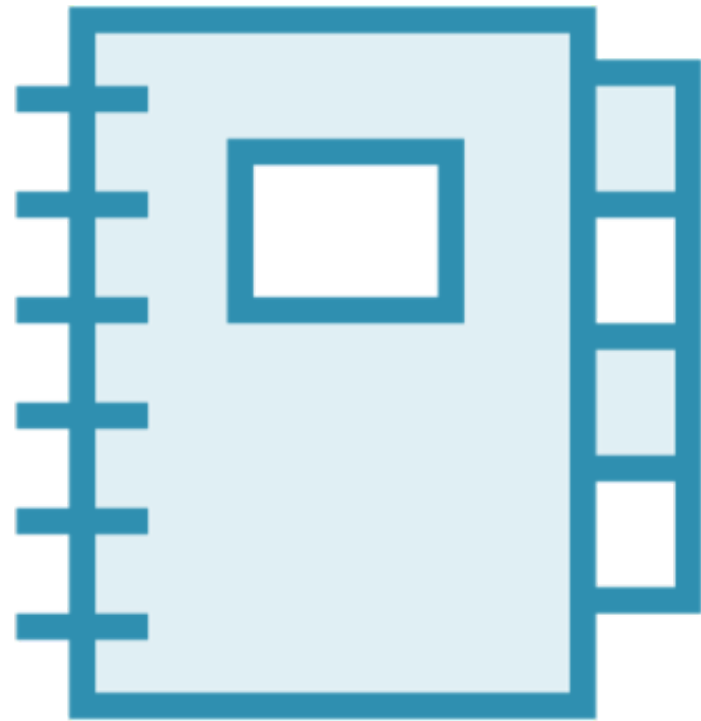
Read-Evaluate-Print-
Loop for instant
feedback



Powerful

Integrations with
cloud and distributed
technologies

Python on Jupyter



Web-based

Interactive

Code and markdown

Visualizations

Shell commands

Integration with file system

Project Jupyter

Non-profit, open-source project born out the IPython project in 2014 - includes Jupyter as well as JupyterLab.

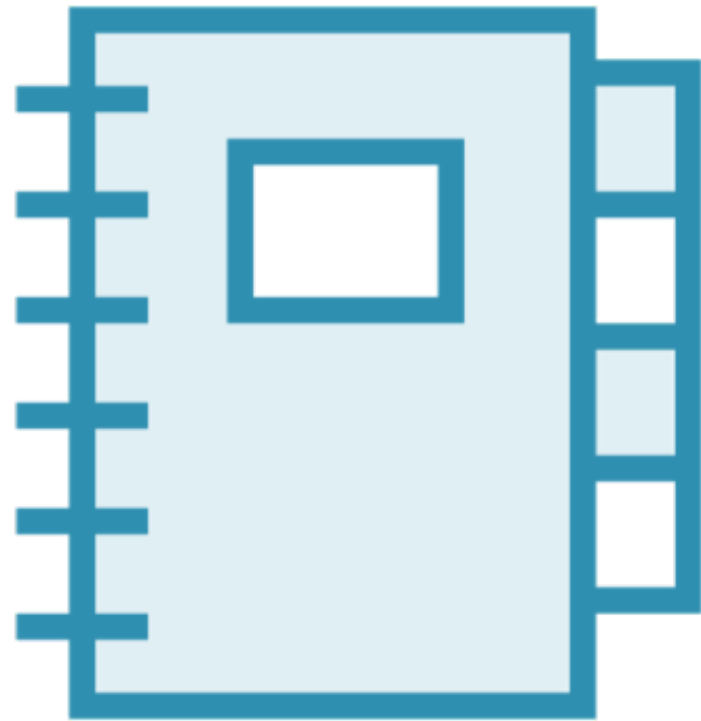
IPython

Original project for interactive, web-based Python notebooks. Now, since 2014, a part of Jupyter focused on interactive Python.

JupyterLab

Next-generation notebook interface from Jupyter. Fully backward compatible with Jupyter notebooks, but nicer UI and enhanced usability.

JupyterLab

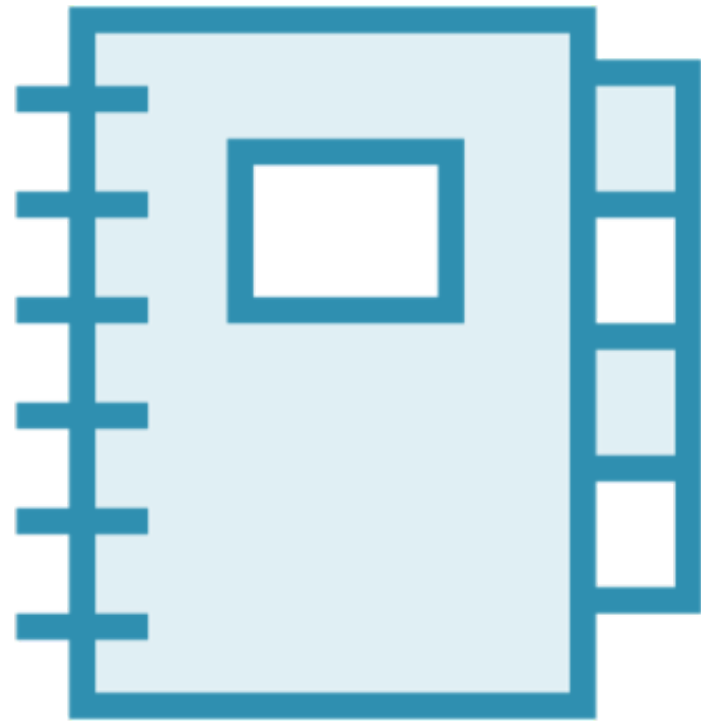


Same notebook server and file format

Full support for old notebooks

Can co-exist on same machine with Jupyter

JupyterLab



File browser

Consoles

Terminals

Text and markdown editors

CSV and JSON editors

Interactive maps

.ipynb Files



Notebook document extension

Contains all content in the notebook

Input code and results

Images

Markdown explanatory text

.ipynb Files



Jupyter notebooks formerly known as IPython notebooks

Explains the extension

Stored in the JSON format

Cannot be directly used as Python script files

Demo

**Windows: Installing and running
Jupyter notebooks with the Anaconda
distribution of Python**

Demo

**Windows: Installing and running
Jupyter notebooks using pip**

Demo

MacOS: Installing and running Jupyter notebooks with the Anaconda distribution of Python

Demo

MacOS: Installing and running Jupyter notebooks with the Anaconda distribution of Python using the command line script

Demo

**Running Jupyter notebooks in Docker
containers**

Demo

Installing and running JupyterLab

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