

# JupyterNotebook, Package management using Pip

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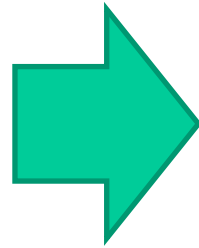
# JupyterNotebook, Package management

## Goal:

- Understand the tools
- Have tool running on your local machine
- Experiment with them



# Agenda



# Jupyter Notebook Explained

The image shows a Jupyter Notebook interface with several components highlighted by numbered callouts:

- 1. Cell**: Points to the code input area containing the following code:

```
Welcome!  
  
In [1]: import matplotlib as plt  
  
In [2]: 5+6  
Out[2]: 11
```
- 2. Markdown**: Points to the 'Welcome!' text at the top of the cell.
- 2. Code**: Points to the code input area.
- 4. Title**: Points to the 'Introduction Lab' title in the header.
- 5. Kernel**: Points to the 'Python 3 (ipykernel)' label in the top right.
- 6. Directory**: Points to the browser address bar showing the file path.



\$ pipenv

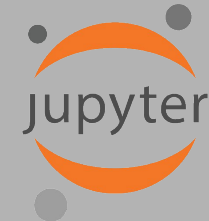
# Package management with virtual environments

## Computer

### Folder for Project 1



### Folder for Project 2



## For testing with Arxiv Project

- Download the Arxiv Tutorial from Moodle
- Extract to your desired directory
- Open Terminal in that directory
- Run *pipenv shell* to create a virtual environment for the project  
arxiv
- Following steps on next slide

# Package management with Pip and pipenv

One Time  
SetUp:

	Windows	MacOS	Linux
Verify python installation	<code>python3 - -version</code>		
Verify pip installation	<code>pip3 - -version</code> <code>pip 24.0</code>		
Install pipenv	<code>pip install pipenv</code>		

	Windows	MacOS	Linux
Create Environment	<code>Pipenv shell</code>		
Activate Environment	<code>Pipenv shell</code>		
Install package	<code>Pipenv install numpy</code>		
Install from requirements.txt	<code>Pipenv install -r requirements.txt</code>		
Deactivate Environment	<code>deactivate</code>		
Freeze Environment	<code>Pip freeze &gt; requirements.txt</code>		
Delete Environment	<code>pipenv --rm</code>		



# Make Pipenv available in Jupyter Notebook

Per  
Environment:

	Windows	MacOS	Linux
Install jupyter notebook kernel	pip install jupyter		
Add env kernel	ipython kernel install --user --name=venv		
Run jupyter notebook	jupyter notebook		