

Introduction to Python

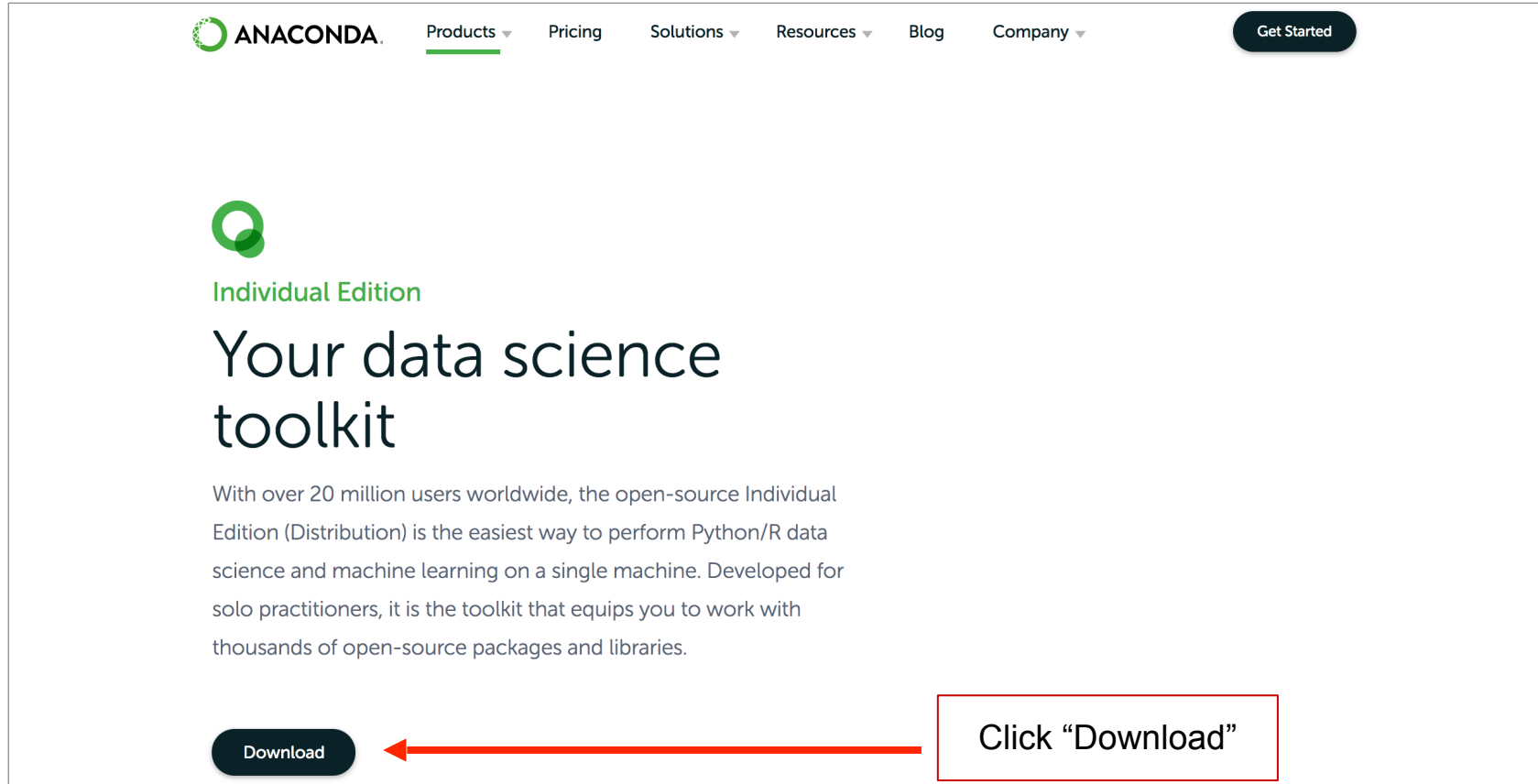
ICPSR Summer Program 2022

Installation Instructions for Python3 & Jupyter Notebook

About the Installation Instructions


- This document details the steps for installing Python 3 and Jupyter Notebook on Mac and Windows systems. We will write all the Python code in Jupyter Notebook in this course.
- I **strongly recommend** that you finish installation before the first lecture. Installation may take between 30-60 minutes and would be difficult to do during the lecture.

1. Download Anaconda - <https://www.anaconda.com/products/individual>



The screenshot shows the Anaconda Individual Edition product page. At the top is a navigation bar with the Anaconda logo, links for Products, Pricing, Solutions, Resources, Blog, and Company, and a 'Get Started' button. The main content area features the Anaconda logo, the text 'Individual Edition', and the heading 'Your data science toolkit'. Below this is a paragraph describing the product. At the bottom left is a 'Download' button, which is highlighted by a red arrow pointing from a red-bordered box containing the text 'Click "Download"'.

ANACONDA. Products Pricing Solutions Resources Blog Company Get Started

 Individual Edition

Your data science toolkit

With over 20 million users worldwide, the open-source Individual Edition (Distribution) is the easiest way to perform Python/R data science and machine learning on a single machine. Developed for solo practitioners, it is the toolkit that equips you to work with thousands of open-source packages and libraries.

Download

Click "Download"

2. Choose the Graphical Installer for Python 3.9

Anaconda Installers

Windows

Python 3.9

64-Bit Graphical Installer (594 MB)

32-Bit Graphical Installer (488 MB)

MacOS

Python 3.9

64-Bit Graphical Installer (591 MB)

64-Bit Command Line Installer (584 MB)

64-Bit (M1) Graphical Installer (316 MB)

64-Bit (M1) Command Line Installer (305 MB)

Linux

Python 3.9

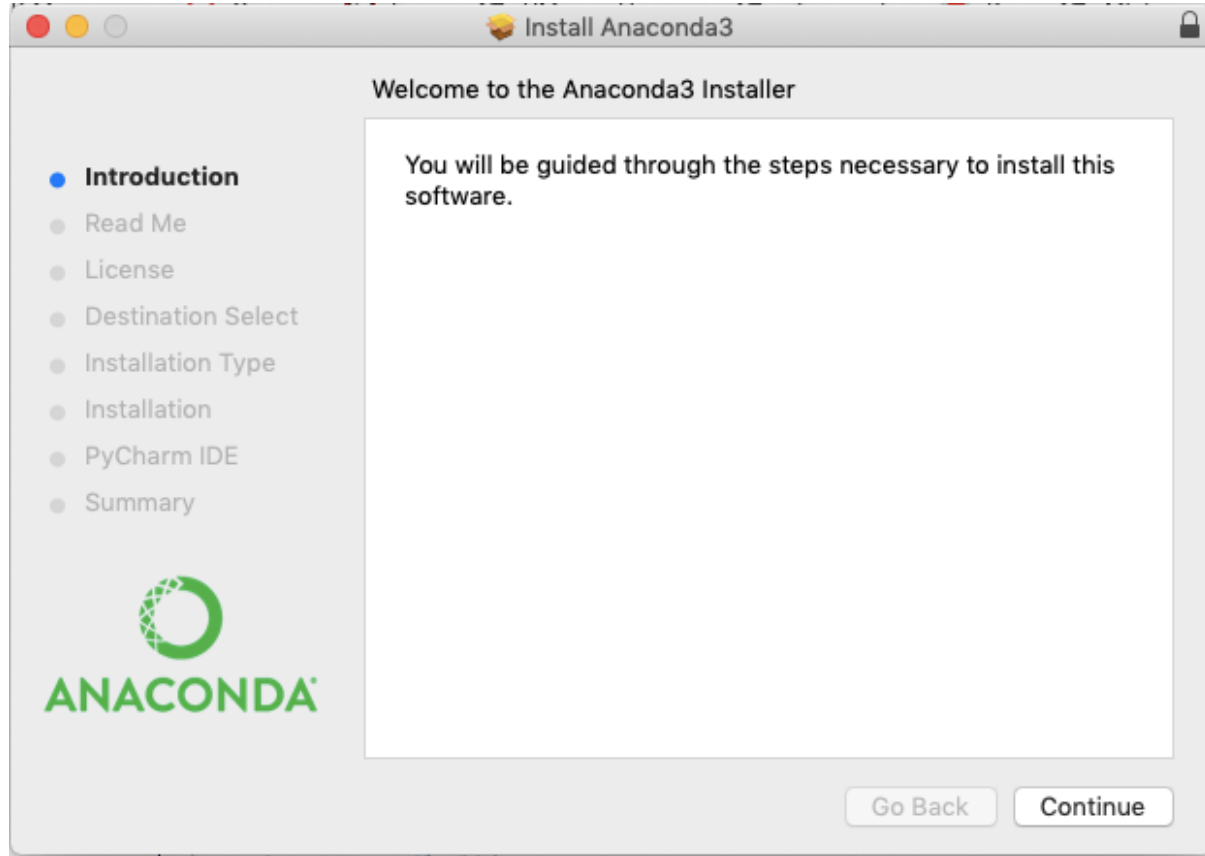
64-Bit (x86) Installer (659 MB)

64-Bit (Power8 and Power9) Installer (367 MB)

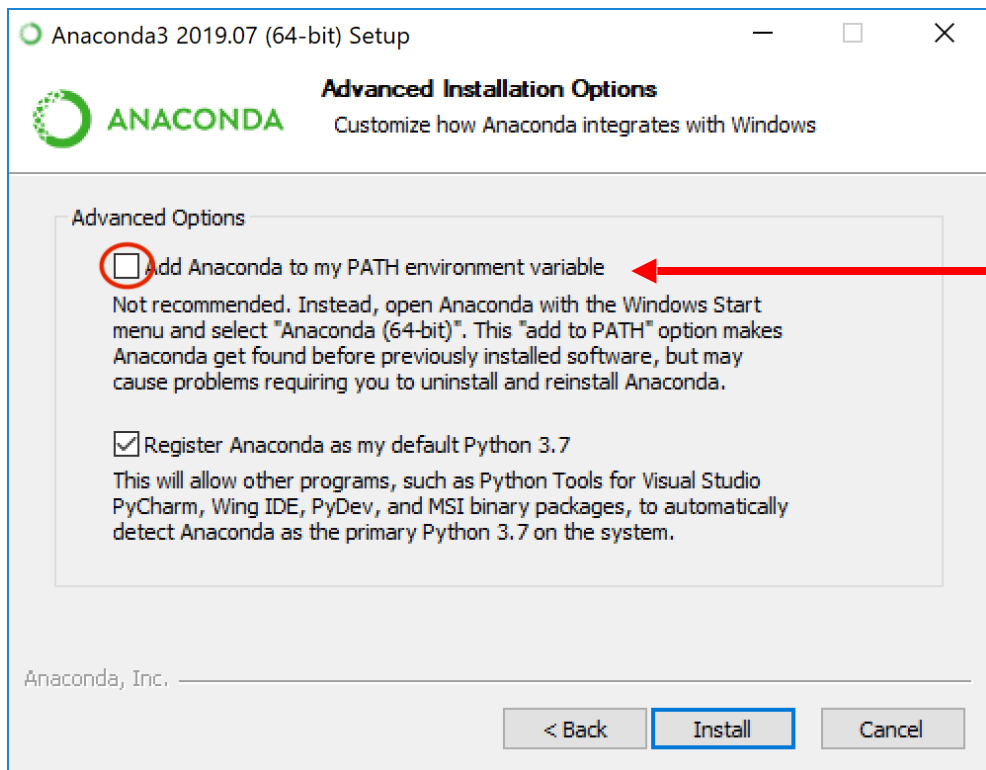
64-Bit (AWS Graviton2 / ARM64) Installer (568 MB)

64-bit (Linux on IBM Z & LinuxONE) Installer (280 MB)

3. For Mac Users: Run the package to install and follow instructions



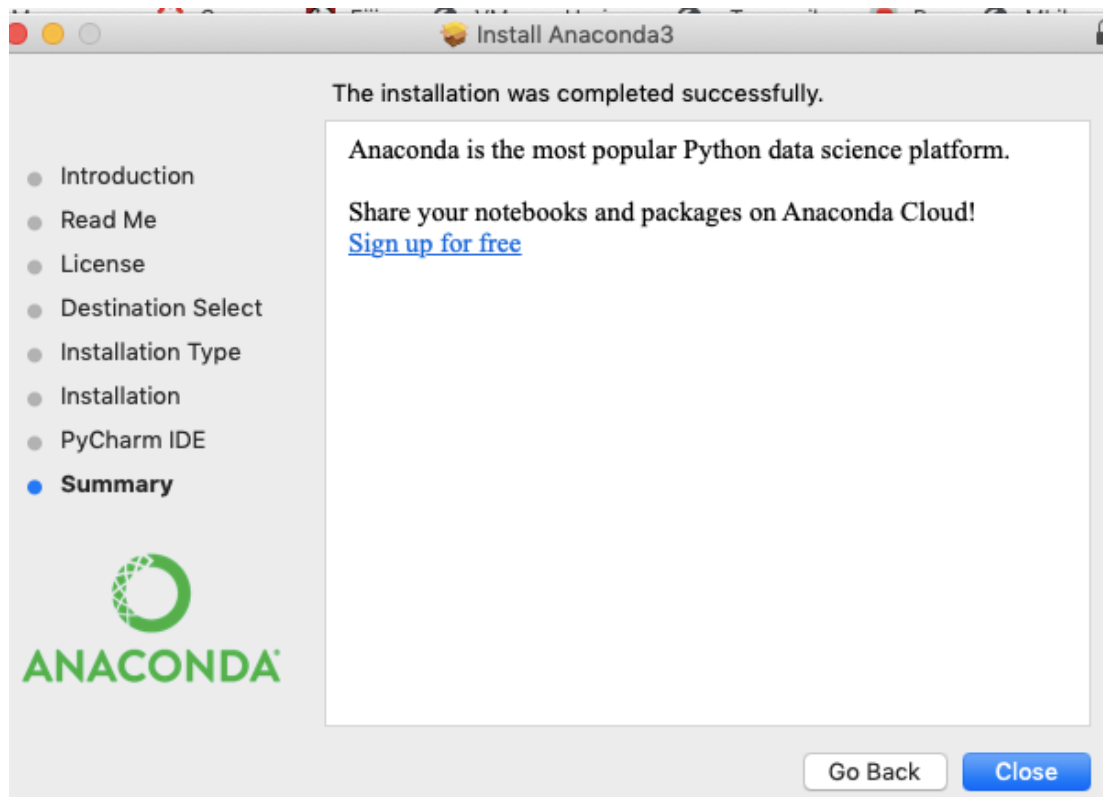
3. For Windows Users: Check Note Below!



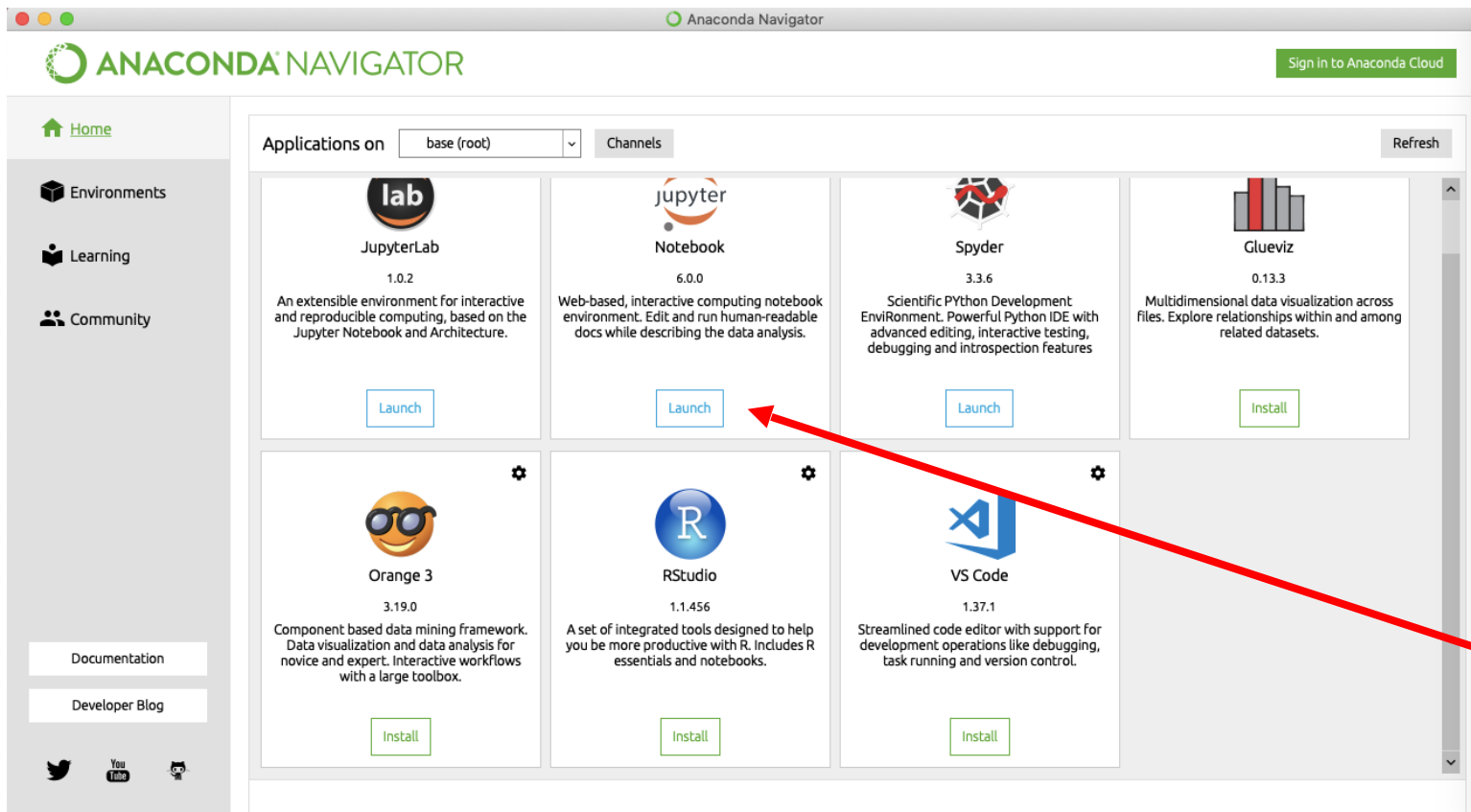
If you are installing Anaconda on Windows, **please check the box marked "Add Anaconda to my PATH environment variable"**.

Follow other instructions as mentioned.

4. Finish installation



5. Open Anaconda Navigator and Launch Jupyter Notebook



The screenshot displays the Anaconda Navigator desktop application. The interface includes a top header with the Anaconda Navigator logo and a 'Sign in to Anaconda Cloud' button. A left sidebar contains navigation links for Home, Environments, Learning, and Community, along with links to Documentation and Developer Blog at the bottom. The main panel, titled 'Applications on base (root)', shows a grid of application cards. Each card represents a different tool available within the environment. A red arrow points from a text box on the right to the 'Launch' button of the Jupyter Notebook card.

Application	Version	Description	Action
JupyterLab	1.0.2	An extensible environment for interactive and reproducible computing, based on the Jupyter Notebook and Architecture.	Launch
Jupyter Notebook	6.0.0	Web-based, interactive computing notebook environment. Edit and run human-readable docs while describing the data analysis.	Launch
Spyder	3.3.6	Scientific PYTHON Development EnviRonment. Powerful Python IDE with advanced editing, interactive testing, debugging and introspection features	Launch
Glueviz	0.13.3	Multidimensional data visualization across files. Explore relationships within and among related datasets.	Install
Orange 3	3.19.0	Component based data mining framework. Data visualization and data analysis for novice and expert. Interactive workflows with a large toolbox.	Install
RStudio	1.1.456	A set of integrated tools designed to help you be more productive with R. Includes R essentials and notebooks.	Install
VS Code	1.37.1	Streamlined code editor with support for development operations like debugging, task running and version control.	Install

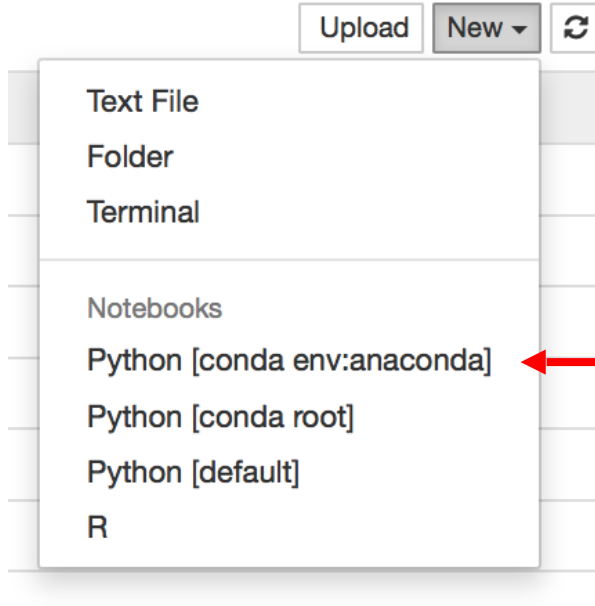
Click
"Launch"

5. Create your first Jupyter Notebook



Clicking the "Launch" button in the Anaconda Navigator will open the Jupyter Notebook dashboard in your computer's default web-browser. Click the "New" button to create a new notebook

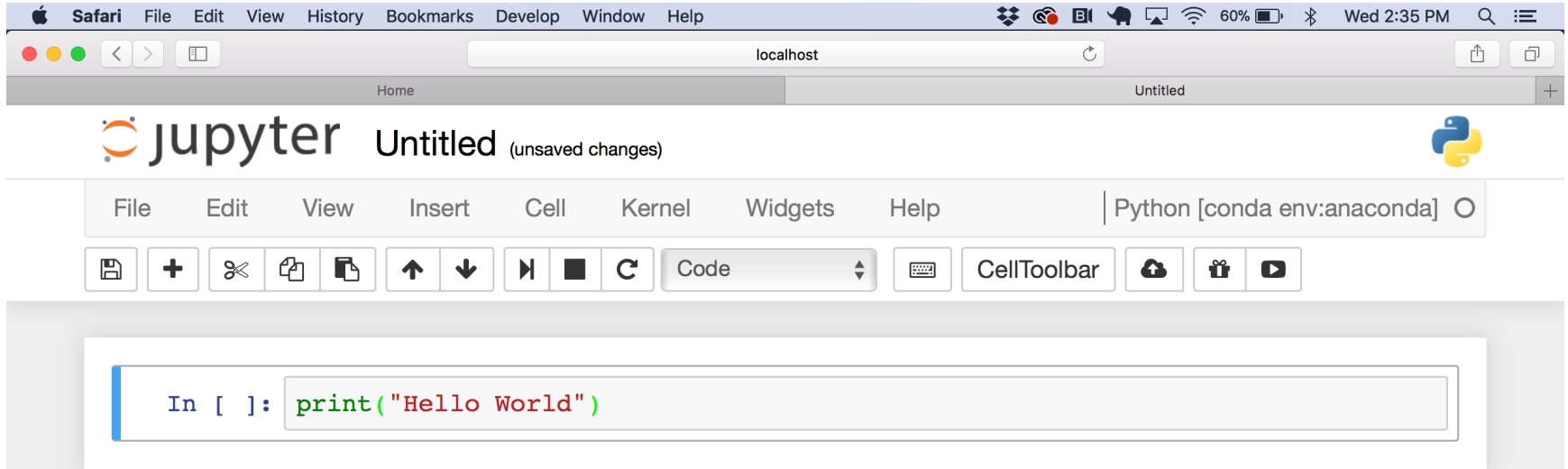
5. Create your first Jupyter Notebook



Select "Python [conda env:anaconda]" to create a Jupyter Notebook.

This will launch a new tab in the browser, next to the Jupyter Notebook dashboard tab.

6. Write Python Code in the cell: `print("Hello World")`



The image shows a Safari browser window displaying a Jupyter Notebook. The browser's address bar shows 'localhost'. The Jupyter interface includes a top menu bar with 'File', 'Edit', 'View', 'History', 'Bookmarks', 'Develop', 'Window', and 'Help'. Below this is a toolbar with icons for saving, adding, deleting, and running code. The main area of the notebook shows a single code cell with the prompt 'In []:' followed by the Python code `print("Hello World")`. The notebook title is 'Untitled (unsaved changes)' and the kernel is 'Python [conda env:anaconda]'.

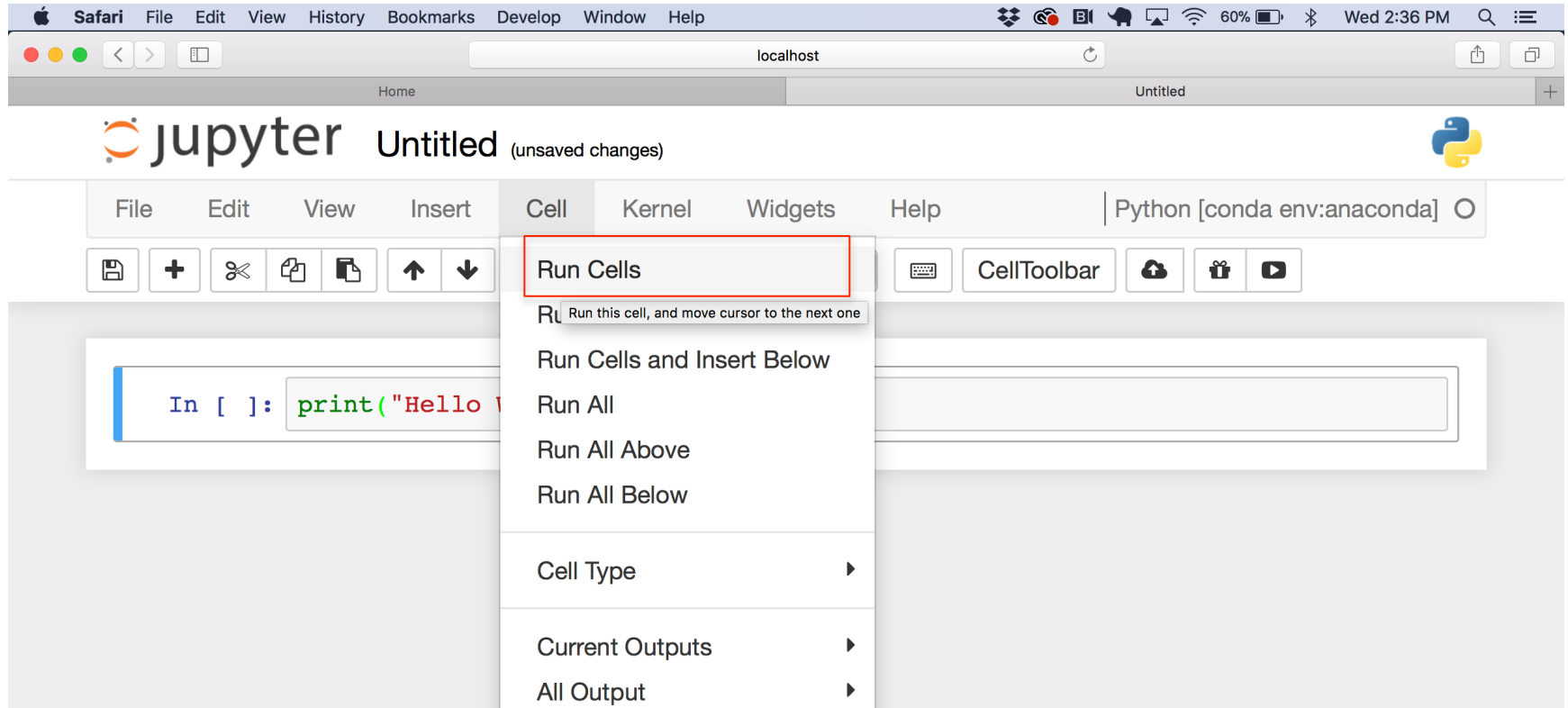
Safari File Edit View History Bookmarks Develop Window Help localhost

jupyter Untitled (unsaved changes)

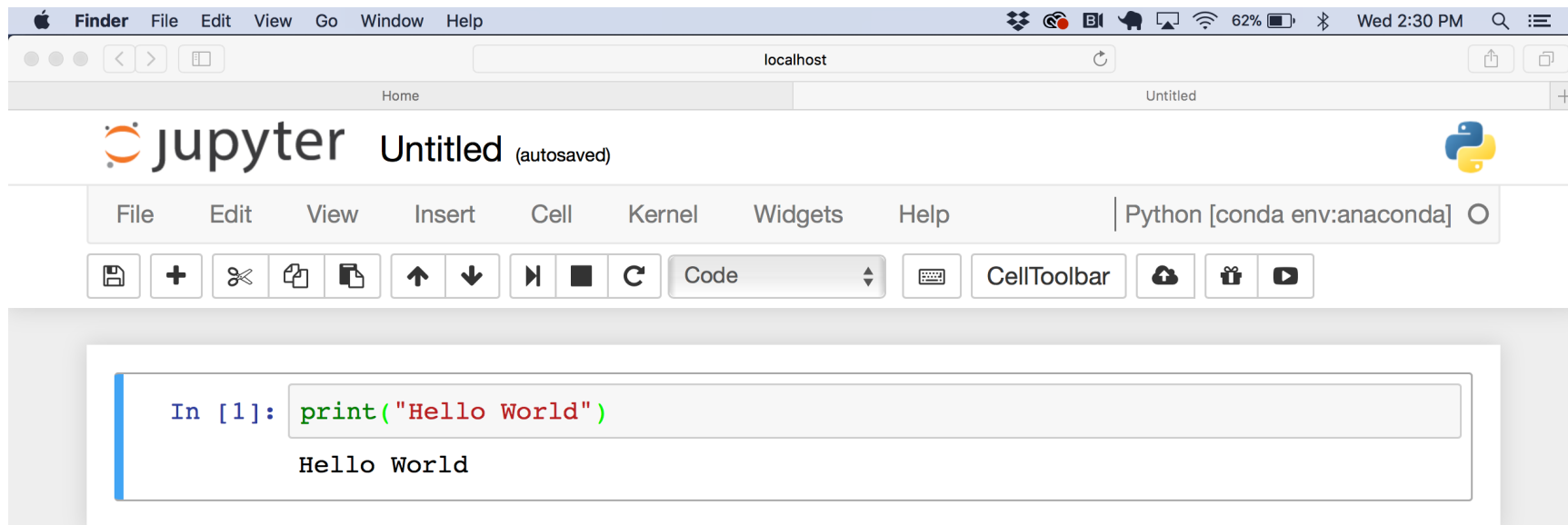
File Edit View Insert Cell Kernel Widgets Help Python [conda env:anaconda]

In []: `print("Hello World")`

6. To run the code in the cell, click "Cell" in the Menu Bar. Then click "Run Cells"



If the everything was installed correctly, the cell should output Hello World as shown below



If the output is not rendered, **do not panic!** Leave a comment on Canvas / email me (imendoza@umich.edu). Either way, we will fix all installation issues in the first lecture and office hours :-)

