

Jupyter Notebook Setup



Once Jupyter is running, point your web browser at http://localhost:8888 to start using Jupyter notebooks. If everything worked correctly, you should see a screen like this, showing all available Jupyter notebooks in the current directory:

A screenshot of a computer

Description automatically generated

A Jupyter notebook is made up of a number of **cells**. Each cell can contain Python code. You can execute a cell by clicking on it and pressing Shift-Enter. When you do so, the code in the cell will run, and the output of the cell will be displayed beneath the cell. For example, after running the first cell the notebook looks like this:

A screenshot of a computer

Description automatically generated

Tables in Jupyter

|  |  |
| --- | --- |
| | Header 1 | | | Header 2 | |
| | ---------- | | | --------- | |
| | Row 1, Cell 1 | | | Row 1, Cell 2 | |
| | Row 2, Cell 2 | | | Row 2, Cell 2 | |

Example: Temperature Table

|  |  |
| --- | --- |
| City, State | High Temp |
| Furnace Creek Ranch, CA | 134 degrees F. |
| Lake Havasu City, AZ | 128 degrees F. |

Jupyter Notebook Shortcuts

* + **Enter:** Enter edit mode for a cell.
  + **Esc:** Exit edit mode.
  + **Shift+Enter:** Run the current cell and move to the next cell.
  + **Ctrl+Enter:** Run the current cell without moving to the next.
  + **Alt+Enter:** Run the current cell and insert a new cell below.
  + **A:** Insert a new cell above the current cell.
  + **B:** Insert a new cell below the current cell.
  + **X:** Cut the selected cell.
  + **C:** Copy the selected cell.
  + **V:** Paste the copied cell.
  + **DD:** Delete the selected cell.
  + **Z:** Undo the last action.
  + **Shift+Z:** Redo the last action.
  + **M:** Convert the selected cell to Markdown.
  + **Y:** Convert the selected cell to code.
  + **H:** Show all keyboard shortcuts.
* **Cell Operations:**
  + **Ctrl+Shift+-:** Split a cell at the cursor.
  + **Ctrl+Shift-M:** Merge selected cells.
* **Scrolling:**
  + **Shift+Space:** Scroll down.
  + **Ctrl+Shift+Space:** Scroll up.

**Extensions:**

* **Table of Contents:** Automatically generates a table of contents based on your notebook's headings.
* **Code Folding:** Allows you to collapse or expand code cells.
* **Hinterland:** Provides code completion suggestions.
* **Variable Inspector:** Displays information about variables in your notebook.
* **ExecuteTime:** Displays the execution time of each cell.
* **Collapsible Headings:** Allows you to collapse and expand headings.
* **Code Prettifier:** Automatically formats your code.
* **Spell Checker:** Checks your notebook for spelling errors.

**Best Practices:**

* **Organize Your Notebook:** Use clear headings and comments to structure your notebook.
* **Use Markdown Cells:** Write explanations, notes, and conclusions in Markdown cells.
* **Comment Your Code:** Explain the purpose of your code, especially for complex functions.
* **Use Magic Commands:** Jupyter Notebooks support magic commands that can enhance your workflow. For example, %matplotlib inline allows you to display plots directly in the notebook.
* **Utilize Keyboard Shortcuts:** Learn and use keyboard shortcuts to speed up your workflow.
* **Version Control:** Use Git to track changes to your notebooks and collaborate with others.
* **Share Your Notebooks:** Share your notebooks with others using platforms like GitHub or Jupyter Notebook Viewer.