

Setup Julia

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For the hands-on session, setting up Julia on the local computer is strongly recommended. There are several ways to accomplish this task. First, you can choose one of the following methods to get *Julia* and *Jupyter* installed on your local machine.

Install Julia

Official Julia Release

The latest Julia release can be found at [official website](https://julialang.org/downloads/). First, download the installer in respect of your operating system.

1. Download Julia installer: <https://julialang.org/downloads/>
2. Specific instructions for each platform: <https://julialang.org/downloads/platform/>

jill with pip

If you have already installed *pip* (if not, try install pip [here](#)). *Jill* is a Julia installer for Linux, macOS and Windows. Jill can be installed via pip. Use the following command to get jill installed.

```
pip install jill
```

Then, use jill to install Julia.

```
jill install
```

What is expected when Julia is successfully installed?

After getting Julia installed, click the Julia app icon or type `julia` on cmd/terminal. The Julia REPL¹ will show up (Figure 1).

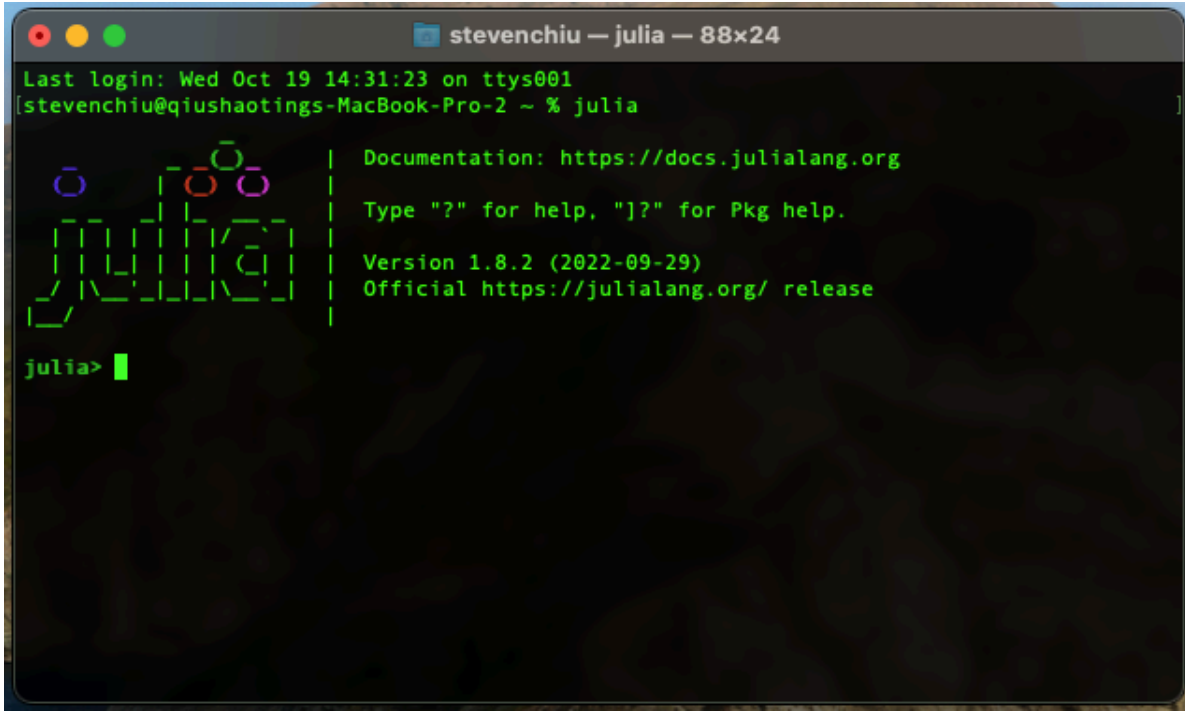


Figure 1: Julia initiated on the terminal (MacOS)

Install IJulia: an Julia package for connecting jupyter

IJulia is an interface that combines Julia and [Jupyter interactive environment](#). This interface can be installed with Julia package manager — [Pkg.jl](#). The following steps show how to get IJulia installed. Noted that any registered packages² can be installed via these steps.

1. Initiate Julia REPL
2. Install **IJulia**. The following two methods are equivalent.

Use `Pkg.add`

¹Read-eval-print loop

²Registered packages can be found on [JuliaHub](#)

```
using Pkg
Pkg.add("IJulia")
```

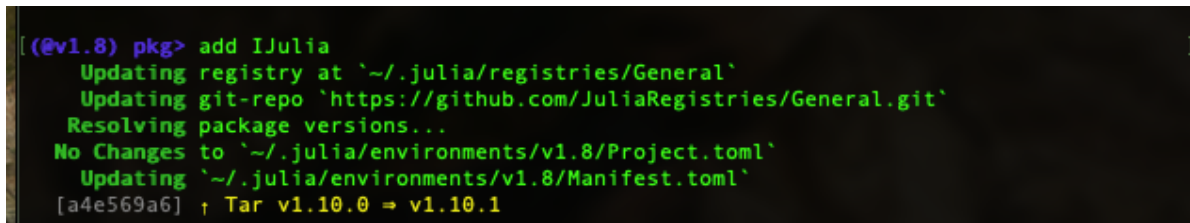
Use Pkg interactive environment

Type `]` (right square bracket on your keyboard) to initiate Pkg environment.

```
]
```

The Pkg mode in Julia REPL is a shortcut to manipulate the Julia environment. To further install the package, type

```
add IJulia
```



```
[(@v1.8) pkg> add IJulia
  Updating registry at `~/.julia/registries/General`
  Updating git-repo `https://github.com/JuliaRegistries/General.git`
  Resolving package versions...
  No Changes to `~/.julia/environments/v1.8/Project.toml`
  Updating `~/.julia/environments/v1.8/Manifest.toml`
 [a4e569a6] ↑ Tar v1.10.0 => v1.10.1
```

Figure 2: Installing IJulia. Noted that the Pkg environment is started (`(@v1.8) pkg>` in blue)

Get Started with Jupyter and Julia

Once `IJulia.jl` is successfully installed, use the following command to initiate jupyter session (Figure 3).

```
using IJulia
jupyterlab()
```

Done!

Congratulations! You have successfully gotten started with the Julia programming language. In the following session, we will review Julia basics and the SciML package. The hands-on sessions will require to use JupyterLab to run Julia sessions.

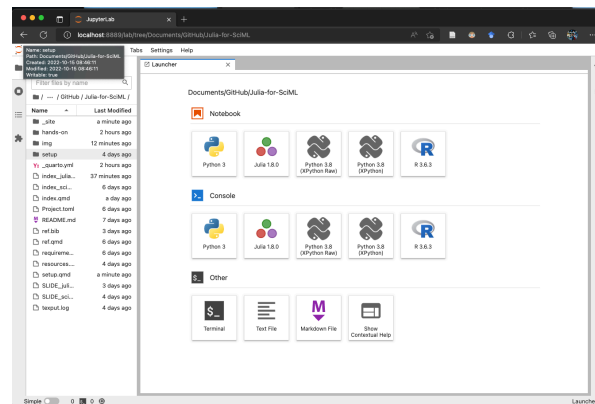


Figure 3: Jupyter Lab. Noted that the Julia kernel is installed.