1. Install Julia

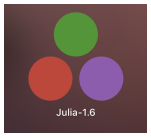
- Go to: https://julialang.org/downloads/, and install the current stable release v1.7.3.

2. Install anaconda navigator

1. **Windows**: https://docs.anaconda.com/anaconda/install/windows/
2. **MacOS**: Mac OS
3. **Linux**: https://docs.anaconda.com/anaconda/install/linux/
4. If you are using other Operating Systems, please go to: https://docs.anaconda.com/anaconda/install/, and choose the anaconda version most suitable:

- Installing on Windows
- Installing on macOS
- Installing on Linux
- Installing on AWS Graviton2 (arm64)
- Installing on Linux-s390x (IBM Z)
- Installing on Linux POWER
- Installing in silent mode
- Installing for multiple users
- Verifying your installation
- Anaconda installer file hashes
- Updating from older versions
- Using Anaconda on older operating systems
- Uninstalling Anaconda Distribution

3. Install Julia kernel used in Jupyter Notebook

- Open Julia command line:
    - Do this by either
        i. **Mac, Windows**: double-clicking the Julia executable 

”
        ii. **Linux**: Invoking the julia executable from its previously installed location on your computer
    - In Pkg mode (type “]” can change to Pkg mode from Julia Mode), type: “add IJulia”

- `(@v1.6) pkg> add IJulia`

(Note: can use “ctrl+c” exit the Pkg mode to Julia mode; use “]” to move to Pkg mode from Julia mode.)

4. Install dependencies in Julia

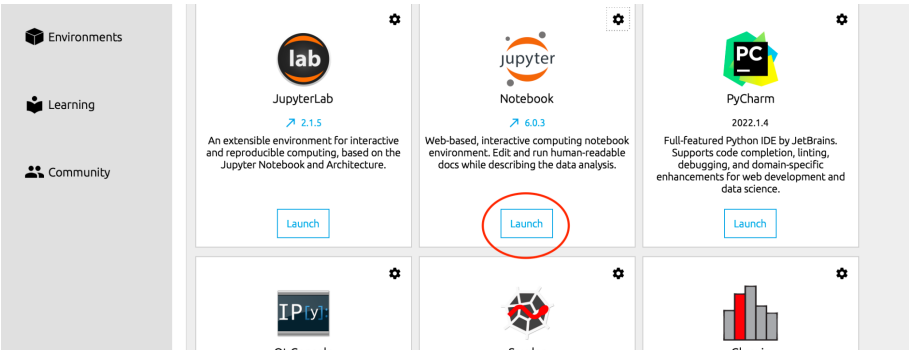
- Also in the Julia command line, type:
  - add https://github.com/AlgebraicJulia/StockFlow.jl
  - add OrdinaryDiffEq
  - add LabelledArrays
  - add Plots
  - add Catlab
  -
  -
  -
  -

For example:

```
(@v1.6) pkg> add LabelledArrays
```

5. Create a new Notebook and Build your model

- Open Anaconda Navigator by double clicking the executable
- Click “Launch” under Jupyter Notebook, such as:



- In the Notebook Dashboard, click “New -> Julia 1.7.3”. Please note that if no such Julia option shows up, please go to Section 3 and add IJulia

(Please note, the Julia version on your side should be Julia 1.7.3)

- You just created a new Jupyter Notebook with Julia kernel and can write your code in the Notebook now.

6. Optional

- We can also open Julia in the Terminal command line
  - Type “julia” in terminal

Please
But, if you are using MacOS, probably you need to add the executable Julia to the path first by typing
“sudo ln -s /Applications/Julia-1.6.app/Contents/Resources/julia/bin/julia /usr/local/bin/julia”
In the terminal command line. For example:

```
(base) xiaoyanli@MacBook-Pro ~ % sudo ln -s /Applications/Julia-1.6.app/Contents/Resources/julia/bin/julia /usr/local/bin/julia
Password:
(base) xiaoyanli@MacBook-Pro ~ % julia
               _
   _       _ _(_)_     |  Documentation: https://docs.julialang.org
  (_)     | (_) (_)    |
   _ _   _| |_  __ _   |  Type "?" for help, "]?" for Pkg help.
  | | | | | | |/ _` |  |
  | | |_| | | | (_| |  |  Version 1.6.1 (2021-04-23)
 _/ |\__'_|_|_|\__'_|  |  Official https://julialang.org/ release
|__/                   |

julia>
```

7. Common Problems

- If you did not find the julia kernel in Jupyter Notebook, you may find it handy to refer to the following website: https://datatofish.com/add-julia-to-jupyter/
- Error precompiling IJulia
    - ERROR: LoadError: InitError: SystemError: opening file "/usr/share/julia/cert.pem": No such file or directory
    - `sudo ln -s /etc/ssl/cert.pem /usr/share/julia/cert.pem`
        - May need to look in a different location for ceert.pem, depending on your Linux distribution.
- If the Graphs plotted using function Graph() failed to show:
    - In julia, type command: run(`dot -V`)
      You should see the Graphviz callable:

```
julia> run(`dot -V`)
dot - graphviz version 2.44.1 (20200629.0846)
Process(`dot -V`, ProcessExited(0))
```

    - need to install graphviz, following instructions in: https://graphviz.org/download/