Julia Resources

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Everything from Today, Including This Doc

`https://www.github.com/nickeubank/JuliaOverview`

Cheat Sheets

- All the important Julia syntax: `https://juliadocs.github.io/Julia-Cheat-Sheet/`
- Side-by-side Julia, Python, Matlab syntax comparisons: `https://cheatsheets.quantecon.org/`

Forums

- Place for questions: `discourse.julialang.org`
- Where to subscribe for news on 1.0 releases: `https://discourse.julialang.org/c/announce`

Installation / Getting Julia

- You can get Julia at `www.julialang.org/downloads`.
- Interactive Development Environment: the most popular IDE is called Juno, and is provided through that Atom text editor by installing the `uber-juno` package. Note requires prior install of Julia from `www.julialang.org/downloads`. Detailed instructions: `https://github.com/JunoLab/uber-juno/blob/master/setup.md`

Tutorials

- Great tutorials on `www.juliabox.com`. Just log in and go to Tutorials.

- For 2 hour video of Julia Computing instructor walking through these tutorials, go to `https://julialang.org/learning/` and select *Intro to Julia*.

Julia on ACCRE

- Julia example scripts and installation: `https://github.com/accre/SLURM/tree/master/julia-job`

Contrasts with Python

Familiar:

- Duck-typing
- Pass by reference
- Iterators
- List (and array) comprehensions

Unfamiliar:

- No integer overflow checking
  - `SafeInts` package available
- Built in Package Manager
  - No name spaces *yet*; coming in new package manager with 1.0 release.
- Not white-space sensitive
- Indexes start at 1, not 0
- Multiple dispatch for functions
- Loops as fast as vectorized functions

Contrasts with R

Familiar:

- Multiple dispatch
- Built in package manager

Unfamiliar:

- No integer overflow checking

  - `SafeInts` package available
- Pass-by-reference and mutable / immutable data types
- LOTS of syntactic sugar
- Loops as fast as vectorized functions