Julia

Julia is a high-performance language for scientific computing, which also happens to be readable. Julia may be the best choice for our work, though there may be times when your collaborators want to use Python or R, or when tools already exist in those languages that are perfect for a particular project.

Installation

Use `juliaup` to manage Julia installations. This will let you seamlessly switch between versions across different projects and install new versions.

Usage

If you're coming from MATLAB or Python, here is a useful cheatsheet for translating common operations into Julia. Otherwise, if you've taken BEE 4750 or 4850 with Vivek, you've gotten an introduction to Julia.

Development Environments

VS Code is the editor of choice for Julia. The Julia extension:target="_blank" turns VS Code into a full-fledged Julia development environment:target="_blank".

Package Management

Julia comes with a fantastic package manager, `Pkg.jl`. Make sure you make a new environment for each project (which means each project should have a unique `Project.toml` and `Manifest.toml`).

Learn More

A good introduction to Julia is Introduction to Computational Thinking, an online course from MIT.

Last update: June 26, 2023