



Julia is a high-level, high-performance dynamic programming language for numerical computing. It provides a sophisticated compiler, distributed parallel execution, numerical accuracy, and an extensive mathematical function library. Julia's Base library, largely written in Julia itself, also integrates mature, best-of-breed open source C and Fortran libraries for linear algebra, random number generation, signal processing, and string processing.

USE CASES

CLIMA - A next generation climate modeling platform that is open, scales, and build on the latest advances in machine learning.

Pfizer - Uses Julia to accelerate simulations of new therapies for metabolic diseases up to 175x

Federal Aviation Administration (FAA) - Using Julia to develop the Next-Generation Airborne Collision Avoidance System

PLANNED FEATURES

- + **Parallel precompilation:** In upcoming 1.6, package precompilation is faster and happens before you leave pkg mode.
- + **Compile time percentage:** A small change that should help understanding of one of Julia's quirks for newcomers is that the timing macro `@time` and its verbose friend `@timev` now report if any of the reported time has been spent on compilation.
- + **Downloads & NetworkingOptions:** In Julia 1.6 all downloading is done with libcurl-7.73.0 via the new Downloads.jl standard library.

PROJECT NEEDS

More elaborate and verbose learning materials on JuliaAcademy	300 hours
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Analysis and update of base Julia docs to ensure they are beginner friendly	500 hours
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Compute resources for CI and testing	600 hours
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For more information on Julia, including our governance structure and project roadmap, please visit

<https://julialang.org/>

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