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Bringing Julia from beta to 1.0 to support data-intensive, scientific computing

November 10, 2015

As data-driven research becomes more mainstream, the need for efficient and powerful scientific computing tools increases. To help meet this need, the Gordon and Betty Moore Foundation's Data-Driven Discovery Initiative (https://www.moore.org/programs/science/data-driven-discovery) has granted Julia Computing \$600,000 over the next two years to enable the Julia Language team to move their core open-source computing language and libraries into its first production version over the next two years.

The Julia Language (http://julialang.org./) project's mission is to create a free and open-source language that is general purpose but designed to excel at numerical computing and data science. This combination reduces the need for researchers to learn and use multiple programming languages to perform computational analyses and surrounding tasks. The benefits of using Julia over other languages for scientific work include: its low barrier to entry for scientists and mathematicians, its flexibility and high performance (comparable to C), its graphics and visualization capabilities, and its ability to handle large computational problems efficiently.

"Scientists today are limited by current practices to extract useful information which can hamper research, said Chris Mentzel, Director of the Moore Foundation's Data-Driven Discovery Initiative. We need new tools that can make it easier. The Julia Language offers significant benefits to data-driven researchers and should help speed the pace of discovery."

With funding from the foundation the Julia Language team can bring the current beta-level language into its first long-term supported 1.0 version. As part of its efforts, the Julia team will make improvements to the various libraries (statistical, mathematical, graphical, etc.), develop a debugger, a profiler, and an integrated development environment.

Read more about the Julia Language here (http://julialang.org./).

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