Methodology

We conducted 2,660 interviews online among Julia users and developers June 2 – July 7, 2021

Margin of error is +/- 1.9 percentage points

We recruited respondents online using Slack, Discourse, Twitter, LinkedIn, Facebook, email, JuliaLang.org and JuliaComputing.com

The survey was administered in 4 languages: English, Chinese, Japanese and Spanish
62% Use Julia ‘A Great Deal’, Up from 56% in 2019; Python Is #2 for Julia Users & Developers

How frequently do you use each of the following languages?

<table>
<thead>
<tr>
<th>Year</th>
<th>Julia</th>
<th>Python</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>56%</td>
<td>81%</td>
</tr>
<tr>
<td>2020</td>
<td>58%</td>
<td>81%</td>
</tr>
<tr>
<td>2021</td>
<td>62%</td>
<td>81%</td>
</tr>
</tbody>
</table>

Great deal | Some
---|---
38% | 56%
37% | 58%
32% | 62%
42% | 39%
45% | 39%
36% | 37%
37% | 44%

Other languages not shown include Bash/Shell/PowerShell (67% great deal + some), C++ (38% great deal + some), C (37% great deal + some), MATLAB (37% great deal + some), R (33% great deal + some) and SQL (31% great deal + some)
78% Say Julia Is ‘One of My Favorite Languages’, Up from 73% in 2019; Python Has Been Declining Among Julia Users Since 2019

Other languages not shown include C (26% ‘one of my favorite languages’ + ‘like’), Bash/Shell/PowerShell (19% ‘one of my favorite languages’ + ‘like’), R (19% ‘one of my favorite languages’ + ‘like’), C++ (18% ‘one of my favorite languages’ + ‘like’), MATLAB (18% ‘one of my favorite languages’ + ‘like’).
Thinking about the tasks for which you use Julia, if you weren’t using Julia for these tasks, what programming language would you be using?

<table>
<thead>
<tr>
<th>Programming Language</th>
<th>2021</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Python</td>
<td>75%</td>
<td>73%</td>
<td>76%</td>
</tr>
<tr>
<td>C++</td>
<td>30%</td>
<td>28%</td>
<td>31%</td>
</tr>
<tr>
<td>MATLAB</td>
<td>29%</td>
<td>31%</td>
<td>35%</td>
</tr>
<tr>
<td>R</td>
<td>24%</td>
<td>25%</td>
<td>27%</td>
</tr>
<tr>
<td>C</td>
<td>20%</td>
<td>21%</td>
<td>20%</td>
</tr>
<tr>
<td>Fortran*</td>
<td>13%</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>Bash/Shell/PowerShell</td>
<td>9%</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td>Mathematica*</td>
<td>8%</td>
<td>8%</td>
<td>9%</td>
</tr>
<tr>
<td>Rust*</td>
<td>6%</td>
<td>7%</td>
<td>6%</td>
</tr>
<tr>
<td>Octave*</td>
<td>6%</td>
<td>7%</td>
<td>6%</td>
</tr>
</tbody>
</table>

Responses < 5% not shown: Zig, Visual Basic, TypeScript, Swift, Stata, SAS, PHP, Perl, Nim, Lua, Kotlin, F#, Elixir, Crystal, Clojure, Ruby, Maple, Haskell, Scala, Lisp, C#, SQL, JavaScript, Java, Go

* Added in 2020
Most Started Using Julia in the Last 3-4 Years – After Julia 1.0 Release (Aug 2018)

When did you first start using Julia?

- 2019
- 2020
- 2021

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>2011</td>
<td>1%</td>
<td>0%</td>
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<tr>
<td>2012</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
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<tr>
<td>2013</td>
<td>5%</td>
<td>4%</td>
<td>3%</td>
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<tr>
<td>2014</td>
<td>10%</td>
<td>8%</td>
<td>6%</td>
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<tr>
<td>2015</td>
<td>14%</td>
<td>10%</td>
<td>7%</td>
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<tr>
<td>2016</td>
<td>13%</td>
<td>10%</td>
<td>6%</td>
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</tr>
<tr>
<td>2017</td>
<td>17%</td>
<td>10%</td>
<td>8%</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>23%</td>
<td>20%</td>
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<tr>
<td>2019</td>
<td></td>
<td>17%</td>
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<td></td>
</tr>
<tr>
<td>2020</td>
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<td></td>
<td></td>
<td>23%</td>
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<tr>
<td>2021</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9%</td>
</tr>
</tbody>
</table>

(Jan-Jun 2019) (Jan-Jun 2020) (Jan-Jun 2021)
Most Julia Users & Developers Do At Least 40% of Their Programming Work in Julia

What percentage of the programming work you do is in Julia?

- 0-19%: 31%
- 20-39%: 13%
- 40-59%: 12%
- 60-79%: 14%
- 80-100%: 27%
Thinking only about the TECHNICAL aspects or features of Julia, what are the TECHNICAL aspects or features you like MOST about Julia?

- Speed, performance: 85% (2021), 85% (2020), 85% (2019)
- Ease of use: 69% (2021), 71% (2020), 71% (2019)
- Open source code is available and can be modified: 66% (2021), 68% (2020), 67% (2019)
- Multiple dispatch: 52% (2021), 54% (2020), 53% (2019)
- Package manager**: 53% (2021)
- Solves the two language problem: 45% (2021), 50% (2020), 53% (2019)
- Composable**: 40% (2021)
- Ease of installation**: 32% (2021)
- Distributed / GPU computing*: 30% (2021), 33% (2020)
- Specific package(s): 21% (2021), 27% (2020), 30% (2019)
- Editor and IDE support (Emacs, Vi, Juno, VS Code): 21% (2021), 23% (2020), 21% (2019)
- Integrates well with other language(s): 19% (2021), 21% (2020), 27% (2019)
- One-based indexing: 18% (2021), 21% (2020), 20% (2019)

* Added in 2020
** Added in 2021
### Thinking only about the NON-TECHNICAL aspects or features of Julia, what are the NON-TECHNICAL aspects or features you like MOST about Julia?

<table>
<thead>
<tr>
<th>Feature</th>
<th>2021</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free - don't have to pay to use Julia</td>
<td>80%</td>
<td>83%</td>
<td>83%</td>
</tr>
<tr>
<td>Julia community of developers is talented and active</td>
<td>70%</td>
<td>56%</td>
<td>57%</td>
</tr>
<tr>
<td>Julia community of developers is warm and welcoming</td>
<td>48%</td>
<td>37%</td>
<td>41%</td>
</tr>
<tr>
<td>MIT license</td>
<td>42%</td>
<td>36%</td>
<td>41%</td>
</tr>
<tr>
<td>Easy to create packages</td>
<td>41%</td>
<td>41%</td>
<td>35%</td>
</tr>
<tr>
<td>Learning a new language, I like learning new languages</td>
<td>41%</td>
<td>36%</td>
<td>37%</td>
</tr>
<tr>
<td>Easy to get help and information online</td>
<td>38%</td>
<td>36%</td>
<td>31%</td>
</tr>
<tr>
<td>Great documentation**</td>
<td>37%</td>
<td>38%</td>
<td>27%</td>
</tr>
<tr>
<td>Easy to contribute to the language</td>
<td>29%</td>
<td>30%</td>
<td>18%</td>
</tr>
<tr>
<td>Lots of great teaching and learning resources available online</td>
<td>20%</td>
<td>18%</td>
<td>18%</td>
</tr>
</tbody>
</table>

**Big increase for the Julia community – talented and active, warm and welcoming**

** Added in 2021
The Biggest TECHNICAL PROBLEMS with Julia Are Too Long to Generate the First Plot, Packages, Cannot Generate Self-Contained Binaries and Slow Compile Times

Thinking only about the TECHNICAL aspects or features of Julia, what are the TECHNICAL aspects or features you like LEAST about Julia?

Biggest decreases: Takes too long to generate first plot, doesn’t have all the packages I need, poor editor and IDE support, immature, not stable enough, bugs, package manager is confusing, difficult or doesn’t do what I expect it to

* Added in 2020
** Added in 2021
The Biggest NON-TECHNICAL PROBLEMS with Julia Are Related to Adoption: Too Many Colleagues, Collaborators and Others Use Other Languages

Thinking only about the NON-TECHNICAL aspects or features of Julia, what are the NON-TECHNICAL aspects or features you like LEAST about Julia?

- My colleagues, company or collaborators use other languages
- There are not enough Julia users in my field or industry
- Online tutorials and documentation that are outdated
- There are not enough Julia users in general
- My company, university, clients or other organizations I work with do not allow or support Julia
- Insufficient documentation
- There are not enough teaching and learning resources available online
- There are too many things I don’t know how to do in Julia
- I have more experience with another language
- I am more comfortable in another language
- Julia community is not active enough
- Julia community is too closed and not welcoming enough
- I prefer (2019-20: enjoy) exploring other languages
- Don’t like learning a new language

Biggest declines: outdated or insufficient documentation and tutorials

* Added in 2020
Reasons for Choosing Julia: Seems Like the Language of the Future, Elegance, Speed, Solves the Two Language Problem, Like Learning New Languages, Preferable Syntax

**Why did you start using Julia?**

- Julia seems like the language of the future: 63%
- Elegance of Julia**: 53%**
- Faster for the work I am doing: 46%
- Julia solves the two language problem**: 44%
- I like learning new languages: 43%
- Preferable syntax to other language: 43%
- I heard about Julia from friends or colleagues (2019-20: and I wanted to try it out): 36%
- Better packages for the work I am doing: 13%
- I need or want a specific feature: 7%
- Colleagues in my field use Julia and I want to collaborate with them: 5%
- My instructor or a course I wanted to take uses Julia: 6%

** Added in 2021
### Julia Users & Developers Interact on GitHub, Discourse, Slack and Stack Overflow

Where do you interact with the Julia community?

<table>
<thead>
<tr>
<th>Platform</th>
<th>Interaction Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>GitHub</td>
<td>61%</td>
</tr>
<tr>
<td>Discourse</td>
<td>58%</td>
</tr>
<tr>
<td>Slack</td>
<td>27%</td>
</tr>
<tr>
<td>Stack Overflow</td>
<td>25%</td>
</tr>
<tr>
<td>Twitter</td>
<td>13%</td>
</tr>
<tr>
<td>Reddit</td>
<td>12%</td>
</tr>
<tr>
<td>Zulip</td>
<td>11%</td>
</tr>
<tr>
<td>Discord</td>
<td>5%</td>
</tr>
<tr>
<td>LinkedIn</td>
<td>4%</td>
</tr>
<tr>
<td>JuliaCN</td>
<td>4%</td>
</tr>
<tr>
<td>QQ</td>
<td>3%</td>
</tr>
<tr>
<td>Gitter</td>
<td>2%</td>
</tr>
<tr>
<td>Facebook</td>
<td>1%</td>
</tr>
</tbody>
</table>
Most Popular Packages: Plots, DataFrames, BenchmarkTools, Pluto, DifferentialEquations, IJulia, Revise, Flux, Distributions, CUDA, Makie

What are some of your favorite Julia packages?

- Plots.jl
- DataFrames.jl
- BenchmarkTools.jl
- Pluto.jl
- DifferentialEquations.jl
- IJulia.jl
- Revise.jl
- Flux.jl
- Distributions.jl
- CUDA.jl
- Makie.jl
- PyCall.jl
- StaticArrays.jl
- StatsBase.jl
- JuMP.jl
- PyPlot.jl
- ForwardDiff.jl
- FFTW.jl
- Documenter.jl
- Optim.jl
- Images.jl
- StatsPlots.jl
- DataStructures.jl

Under 10% not shown: LightGraphs.jl, Zygote.jl, PackageCompiler.jl, Turing.jl, UnicodePlots.jl, Gadfly.jl, Symbolics.jl, DiffEqFlux.jl, Modeling Toolkit.jl, GLM.jl, Rcall.jl, StatsFuns.jl, ApproxFun.jl, Franklin.jl, Genie.jl, MLJ.jl, TensorFlow.jl, OnlineStats.jl, Convex.jl, Weave.jl, QuadGK.jl, MKL.jl, TensorOperations.jl, ReinforcementLearning.jl, Queryverse.jl, Cxx.jl, Knet.jl, CxxWrap.jl, MixedModels.jl, TextAnalysis.jl, JavaCall.jl

* Added in 2020
** Added in 2021
Most Say the Julia Package Ecosystem is ‘Somewhat’ Robust

How robust is the current Julia package ecosystem?

- Somewhat Robust: 57%
- Very Robust: 17%
- Not Very Robust: 13%
- Not At All Robust: 1%

Total Robust: 74%
Total Not Robust: 14%
Which of the following types of Julia packages have you created or developed, or contributed to, but did not create or develop?

### 2020
- Created or developed
  - Open source and registered in the Julia general registry: 37%
  - Open source and not registered in the Julia general registry: 29%
  - Private and registered in a private registry: 34%
  - Private and not registered in a private registry: 19%
  - Deprecated or abandoned: 17%
- Contributed to, but did not create or develop
  - Open source and registered in the Julia general registry: 19%
  - Open source and not registered in the Julia general registry: 6%
  - Private and not registered in a private registry: 3%
  - Deprecated or abandoned: 3%

### 2021
- Created or developed
  - Open source and registered in the Julia general registry: 37%
  - Open source and not registered in the Julia general registry: 32%
  - Private and not registered in a private registry: 27%
  - Deprecated or abandoned: 5%
- Contributed to, but did not create or develop
  - Open source and registered in the Julia general registry: 5%
  - Open source and not registered in the Julia general registry: 20%
  - Private and not registered in a private registry: 44%
  - Deprecated or abandoned: 3%
Most Downloaded or Installed Binaries from JuliaLang.org
Fewer Users Compile Julia from Source

How did you download or install the Julia version you use most frequently?

- **Binaries from JuliaLang.org**
  - 2021: 78%
  - 2020: 71%
  - 2019: 70%

- **From my Linux distribution**
  - 2021: 12%
  - 2020: 13%
  - 2019: 12%

- **I compile Julia from source**
  - 2021: 10%
  - 2020: 12%
  - 2019: 17%

- **From Homebrew cask on Mac**
  - 2021: 7%
  - 2020: 6%
  - 2019: 7%

- **JuliaPro**
  - 2021: 5%
  - 2020: 11%
  - 2019: 12%

- **Other package manager***
  - 2021: 3%
  - 2020: 4%

- **Official Docker container**
  - 2021: 3%
  - 2020: 3%

* * Added in 2020
VS Code with Julia Plugin Has Rapidly Become the Editor of Choice for Julia Users & Developers

Which editors or IDEs do you use frequently?

<table>
<thead>
<tr>
<th>Editor/IDE</th>
<th>2021</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>VS Code (2020-21: with Julia plugin)</td>
<td></td>
<td></td>
<td>35%</td>
</tr>
<tr>
<td>Pluto**</td>
<td></td>
<td>23%</td>
<td></td>
</tr>
<tr>
<td>Vi/Vim (2021: Vi/Vim/Neovim)</td>
<td></td>
<td>21%</td>
<td>23%</td>
</tr>
<tr>
<td>Jupyter**</td>
<td></td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>JupyterLab</td>
<td></td>
<td>17%</td>
<td>25%</td>
</tr>
<tr>
<td>Juno</td>
<td></td>
<td>13%</td>
<td>25%</td>
</tr>
<tr>
<td>Emacs</td>
<td></td>
<td>10%</td>
<td>12%</td>
</tr>
<tr>
<td>Rstudio</td>
<td></td>
<td></td>
<td>14%</td>
</tr>
<tr>
<td>Atom (2020-21: without Juno)</td>
<td></td>
<td>6%</td>
<td>13%</td>
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<tr>
<td>Sublime Text</td>
<td></td>
<td>6%</td>
<td>10%</td>
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<tr>
<td>Notepad++</td>
<td></td>
<td>5%</td>
<td>7%</td>
</tr>
<tr>
<td>VS Code without Julia plugin*</td>
<td></td>
<td></td>
<td>6%</td>
</tr>
<tr>
<td>InteliJ (2021: or other Jetbrains product)</td>
<td></td>
<td>4%</td>
<td>6%</td>
</tr>
<tr>
<td>Kate*</td>
<td></td>
<td></td>
<td>2%</td>
</tr>
<tr>
<td>None - I write all my code in the Julia REPL*</td>
<td></td>
<td></td>
<td>2%</td>
</tr>
</tbody>
</table>

* Added in 2020
** Added in 2021
Most Use a Local Cluster or No Cloud Solution

Which cloud solutions, if any, do you use together with Julia?

- None: 57% (2021), 56% (2020), 59% (2019)
- Local cluster*: 18% (2021), 20% (2020), 20% (2019)
- AWS: 10% (2021), 8% (2020), 4% (2019)
- Google Colab: 5% (2021), 4% (2020), 3% (2019)
- MyBinder**: 3% (2021), 3% (2020), 3% (2019)
- JuliaHub**: 3% (2021), 3% (2020), 3% (2019)
- Other cloud provider*: 3% (2021), 3% (2020), 3% (2019)
- REPL.it: 3% (2021), 3% (2020), 2% (2019)
- Azure: 3% (2021), 2% (2020), 2% (2019)
- NextJournal**: 1% (2021), 1% (2020), 1% (2019)
- CoCalc*: 1% (2021), 1% (2020), 1% (2019)

* Added in 2020
** Added in 2021
Nvidia GPUs Are the Most Common Hardware Accelerators

Which hardware accelerators, if any, do you use together with Julia?

- None: 50% (2021), 51% (2020), 54% (2019)
- Nvidia GPU - released in last 2 years: 20% (2021), 23% (2020), 20% (2019)
- Nvidia GPU - released 2+ years ago: 13% (2021), 16% (2020), 20% (2019)
- AMD GPU: 5% (2021), 5% (2020), 5% (2019)
- Multiple Nvidia GPUs in one box: 3% (2021), 4% (2020), 4% (2019)
- Distributed cluster of GPUs: 3% (2021), 3% (2020), 3% (2019)
- Google TPU: 1% (2021), 1% (2020), 2% (2019)
- Other**: 1% (2021), 2% (2020), 1% (2019)
- Google TPU Pod**: 0% (2021), 0% (2020), 0% (2019)

Google TPU Pod**

Julia computing
Even More Respondents This Year Say the Julia Community Is Very Helpful and Collaborative

**How helpful and collaborative is the Julia community?**

- **Very**
  - 2019: 47%
  - 2020: 55%
  - 2021: 58%

- **Somewhat**
  - 2019: 29%
  - 2020: 26%
  - 2021: 25%

- **Not very**
  - 2019: 2%
  - 2020: 3%
  - 2021: 2%

- **Not at all**
  - 2019: 0%
  - 2020: 1%
  - 2021: 0%

- **Don't know**
  - 2019: 16%
  - 2020: 12%
  - 2021: 11%
JuliaCon Continues to Grow Every Year
Virtual Conferences in 2020 and 2021 Made JuliaCon Much More Accessible

Have you attended or do you plan to attend JuliaCon?

- 2014 - Chicago
- 2015 - Boston
- 2016 - Boston
- 2017 - Berkeley
- 2018 - London
- 2019 - Baltimore
- 2020 - Online
- 2021 - Online

- Will likely attend in future
- Would like to attend if funds, schedule and location permit
- Unlikely to attend in future
Most Use Julia for Research and Individual Work

Which of the following best describe your use of Julia?

- I use Julia for research
  - 2021: 70%
  - 2020: 70%
  - 2019: 73%

- I use Julia for work individually
  - 2021: 57%
  - 2020: 56%
  - 2019: 54%

- I use Julia for teaching
  - 2021: 15%
  - 2020: 15%
  - 2019: 16%

- I use Julia for development as part of a team
  - 2021: 15%
  - 2020: 14%
  - 2019: 15%

- I use Julia in production for a business critical task
  - 2021: 10%
  - 2020: 11%
  - 2019: 10%

- I use Julia because it is required for classes at my university
  - 2021: 2%
  - 2020: 2%
  - 2019: 2%

I use Julia because it is required for classes at my university

I use Julia in production for a business critical task

I use Julia for teaching

I use Julia for work individually

I use Julia for research

I use Julia for development as part of a team

I use Julia because it is required for classes at my university

2021
2020
2019

Julia computing
Most Respondents Are Academics (61%)
Among Academics, Most Respondents Are Graduate or Postgraduate Students or Researchers

Among Academics: Are you a(n):

- Graduate or postgraduate student or researcher: 56% (2019), 52% (2020), 56% (2021)
- Faculty**: 19% (2019), 19% (2020), 19% (2021)
- Research scientist**: 11% (2019), 12% (2020), 13% (2021)
- Undergraduate student or researcher: 10% (2019), 7% (2020), 7% (2021)
- Research software engineer: 10% (2019), 7% (2020), 7% (2021)
- Research assistant**: 20% (2019), 14% (2020), 20% (2021)
- Instructor: 34% (2019), 36% (2020), 34% (2021)
- Consultant**: 2% (2019), 2% (2020), 2% (2021)
- System administrator** 2% (2019), 2% (2020), 2% (2021)

Note: ** denotes responses with less than 1% of the total respondents.
Among Professionals, Most Respondents Are Engineers or Developers

AMONG PROFESSIONALS: Are you a(n):

- Engineer, developer: 70% (2019), 71% (2020), 61% (2021)
- Researcher: 45% (2019), 48% (2020), 44% (2021)
- Manager: 11% (2019), 13% (2020), 12% (2021)
- Product manager: 4% (2019), 5% (2020), 6% (2021)
Among Professionals, the Most Common Industries Include Software, IT and Engineering
Among Academics, the Most Common Fields Are Computer Science, Mathematics, Physics and Biology

AMONG ACADEMICS: What is your primary field of study or research?

- Computer science: 30%
- Mathematics: 26%
- Physics: 25%
- Biology: 10%
- Electrical engineering: 8%
- Economics: 6%
- Mechanical engineering: 5%
- Geosciences: 5%
- Aerospace engineering: 4%
- Astronomy: 3%
- Medicine: 3%
- Chemistry: 3%
- Climate science: 2%
- Finance: 2%
- Chemical engineering: 2%
- Business: 2%
- Civil engineering: 1%
- Humanities: 1%
- Education: 1%
- Sociology: 1%
- Political science: 0%
Most Respondents Use Data Science, Modeling and Simulation as Part of their Work
Statistics, Optimization, Machine Learning, Visualization, Scripting, Differential Equations and Artificial Intelligence Are Also Used by Many

Which of the following do you use as part of your work?

** Added in 2021

- Data science
- Modeling and simulation
- Statistics
- Optimization
- Machine learning
- Visualization
- Scripting
- Differential equations
- Artificial intelligence
- Graphics
- Signal processing
- Image processing
- Supercomputing
- Computer vision
- Genetic data processing
- Optimal control
- Robotics
- Quantum computing

** Added in 2021
Most Julia Users & Developers Have 15 Years Coding Experience or Less

How many years of coding experience do you have?

- 0-5: 23%
- 6-10: 27%
- 11-15: 15%
- 16-20: 9%
- 21-25: 7%
- 26-30: 5%
- 30+: 12%
Most Julia Users and Developers Are Age 23-40

What is your age?

- 15-22: 8%
- 23-29: 28%
- 30-35: 20%
- 36-40: 11%
- 41-45: 7%
- 46-50: 6%
- 51-55: 5%
- 56-60: 3%
- 61-65: 3%
- 66-70: 1%
- 70+: 2%

Google Analytics: Docs.JuliaLang.Org

- 2019
- 2020
- 2021

<table>
<thead>
<tr>
<th>Age Group</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-24</td>
<td>20%</td>
<td>30%</td>
<td>35%</td>
</tr>
<tr>
<td>25-34</td>
<td>34%</td>
<td>40%</td>
<td>46%</td>
</tr>
<tr>
<td>35-44</td>
<td>13%</td>
<td>15%</td>
<td>20%</td>
</tr>
<tr>
<td>45-54</td>
<td>9%</td>
<td>8%</td>
<td>9%</td>
</tr>
<tr>
<td>55-64</td>
<td>3%</td>
<td>4%</td>
<td>5%</td>
</tr>
<tr>
<td>65+</td>
<td>2%</td>
<td>3%</td>
<td>4%</td>
</tr>
</tbody>
</table>
Respondents Live or Work in 90 Countries and Regions

What is the country or region where you currently live or work?

<table>
<thead>
<tr>
<th>Country or Region</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>27%</td>
</tr>
<tr>
<td>Germany</td>
<td>9%</td>
</tr>
<tr>
<td>China</td>
<td>6%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>5%</td>
</tr>
<tr>
<td>India</td>
<td>4%</td>
</tr>
<tr>
<td>France</td>
<td>4%</td>
</tr>
<tr>
<td>Canada</td>
<td>3%</td>
</tr>
<tr>
<td>Brazil</td>
<td>3%</td>
</tr>
<tr>
<td>Australia</td>
<td>2%</td>
</tr>
<tr>
<td>Italy</td>
<td>2%</td>
</tr>
<tr>
<td>Japan</td>
<td>2%</td>
</tr>
<tr>
<td>Switzerland</td>
<td>2%</td>
</tr>
<tr>
<td>Sweden</td>
<td>2%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>2%</td>
</tr>
</tbody>
</table>

Respondents also live or work in: Ireland, Argentina, Israel, Hungary, Finland, Turkey, Colombia, New Zealand, Portugal, Czech Republic, South Africa, Poland, Norway, Denmark, Austria, Belgium, Mexico, Spain, Russia, Taiwan, Greece, South Korea, Singapore, Philippines, Peru, Chile, Nigeria, Hong Kong, Romania, Slovenia, Ukraine, Malaysia, Pakistan, Latvia, Iran, Vietnam, Indonesia, Guatemala, Ecuador, Estonia, Uganda, Thailand, Cost Rica, Slovakia, Bolivia, Venezuela, Luxembourg, Malta, Lithuania, Honduras, Liechtenstein, Kuwait, Bulgaria, Jamaica, Belarus, Cameroon, Saint Kitts and Nevis, Brunei, Saudi Arabia, Nicaragua, Bangladesh, Tanzania, Georgia, Tunisia, Iraq, Croatia, Barbados, Iceland, Namibia, Vanuatu, Cyprus, Egypt, Zimbabwe, Jordan, Algeria, Kenya.
Respondents Come from 104 Countries and Regions

What is the country or region where you are originally from?

- United States: 21%
- Germany: 9%
- China: 8%
- India: 6%
- France: 5%
- Brazil: 4%
- United Kingdom: 3%
- Italy: 3%
- Canada: 2%
- Japan: 2%
- Australia: 2%
- Russia: 2%
- Mexico: 2%
- Spain: 2%
- Sweden: 2%
- Belgium: 2%

Respondents also come from: Poland, Netherlands, Austria, Switzerland, Denmark, South Africa, Portugal, Colombia, Czech Republic, Argentina, Hungary, Israel, Greece, New Zealand, Norway, South Korea, Taiwan, Chile, Romania, Ukraine, Finland, Ireland, Peru, Iran, Philippines, Nigeria, Slovenia, Vietnam, Hong Kong, Bulgaria, Pakistan, Malaysia, Indonesia, Venezuela, Singapore, Turkey, Ecuador, Luxembourg, Thailand, Estonia, Egypt, Malta, Bolivia, Guatemala, Slovakia, Croatia, Jamaica, Latvia, Lithuania, Belarus, Tanzania, Benin, Zimbabwe, Costa Rica, Cuba, Ghana, Uganda, Iceland, Morocco, Lebanon, Sri Lanka, Kenya, Togo, Myanmar, Puerto Rico, Saudi Arabia, Georgia, Serbia, Honduras, Jordan, Azerbaijan, Kazakhstan, Cape Verde, Cameroon, Mali, Nicaragua, Tunisia, Algeria, Panama, Monaco, Iraq, Uruguay, Bangladesh, Nepal, Barbados, Rwanda, Bosnia and Herzegovina, Kuwait
Respondents Are Fluent in 59 Languages

In what language(s) are you fluent?

Respondents are also fluent in: Afrikaans, American Sign Language, Arabic, Bengali, Bosnian, Bulgarian, Croatian, Czech, Dutch, Estonian, Farsi, Finnish, Georgian, Greek, Gujarati, Hebrew, Hungarian, Icelandic, Indonesian, Kannada, Kazakh, Korean, Lithuanian, Luxembourgish, Malay, Marathi, Malayalam, Nepali, Norwegian, Oriya, Punjabi, Romanian, Serbian, Slovakian, Slovenian, Swahili, Tagalog, Tamil, Telugu, Thai, Turkish, Ukrainian, Urdu, Vietnamese, Yoruba, Zulu
Most Respondents Are White or Asian

Which of the following best describes your race or ethnicity?

- White: 66% (2019), 57% (2020), 60% (2021)
- Hispanic: 7% (2019), 8% (2020), 8% (2021)
- Middle Eastern: 2% (2019), 2% (2020), 2% (2021)
- Black: 1% (2019), 1% (2020), 1% (2021)
- Decline to answer: 13% (2019), 8% (2020), 12% (2021)
84% Identify as Men, 4% Identify as Women, 1% as Non-Binary and 11% Decline to Answer

Which of the following best describes how you identify?

- Man: 85% (2019), 87% (2020), 84% (2021)
- Woman: 3% (2019), 3% (2020), 4% (2021)
- Non-binary**: 1% (2021)
- Decline to answer: 12% (2019), 10% (2020), 11% (2021)

** Added in 2021
Google Analytics - Docs.JuliaLang.Org: The Share of Website Visits That Are From Women Has Nearly Doubled in Just Two Years

Google Analytics: Docs.JuliaLang.Org

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Man</td>
<td>87%</td>
<td>81%</td>
<td>76%</td>
</tr>
<tr>
<td>Woman</td>
<td>13%</td>
<td>19%</td>
<td>24%</td>
</tr>
</tbody>
</table>
5% Identify as LGBTQ

Do you identify as LGBTQ?

- Yes: 4% in 2019, 4% in 2020, 5% in 2021
- No: 79% in 2019, 81% in 2020, 81% in 2021
- Decline to answer: 17% in 2019, 15% in 2020, 14% in 2021
26% Identify as Underrepresented in Science or Computing

Do you identify as underrepresented in science or computing because of your:

- Age
- Race, ethnicity or natural origin
- Parents' education level
- Language**
- Education level
- Gender
- Income or socioeconomic status
- Disability
- Sexual orientation**
- Gender identity (2019-2020: Sexual identity)
- Religion
- I do not identify as underrepresented in science or computing
- Decline to answer

2019: 65%
2020: 64%
2021: 68%
Contact

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