## Test

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This is a test of the builder system.

## 0.1 Appendix

This tutorial is part of the SciMLTutorials.jl repository, found at: https://github.com/SciML/SciMLTutor For more information on doing scientific machine learning (SciML) with open source software, check out https://sciml.ai/.

To locally run this tutorial, do the following commands:

```
Status `~/.julia/dev/SciMLTutorials/tutorials/Testing/Manifest.toml`
[621f4979] AbstractFFTs v1.0.1
[79e6a3ab] Adapt v3.3.0
```

```
[d360d2e6] ChainRulesCore v0.9.44
```

[35d6a980] ColorSchemes v3.12.1

[3da002f7] ColorTypes v0.11.0

[5ae59095] Colors v0.12.8

[34da2185] Compat v3.30.0

[8f4d0f93] Conda v1.5.2

[d38c429a] Contour v0.5.7

[717857b8] DSP v0.6.10

[9a962f9c] DataAPI v1.6.0

[864edb3b] DataStructures v0.18.9

[e2d170a0] DataValueInterfaces v1.0.0

[ffbed154] DocStringExtensions v0.8.4

[e2ba6199] ExprTools v0.1.3

[8f5d6c58] EzXML v1.1.0

[c87230d0] FFMPEG v0.4.0

[7a1cc6ca] FFTW v1.4.1

[53c48c17] FixedPointNumbers v0.8.4

[59287772] Formatting v0.4.2

[28b8d3ca] GR v0.57.4

[5c1252a2] GeometryBasics v0.3.12

[42e2da0e] Grisu v1.0.2

[cd3eb016] HTTP v0.9.8

[eafb193a] Highlights v0.4.5

[7073ff75] IJulia v1.23.2

[83e8ac13] IniFile v0.5.0

[d8418881] Intervals v1.5.0

[c8e1da08] IterTools v1.3.0

[82899510] IteratorInterfaceExtensions v1.0.0

[692b3bcd] JLLWrappers v1.3.0

[682c06a0] JSON v0.21.1

[b964fa9f] LaTeXStrings v1.2.1

[23fbe1c1] Latexify v0.15.5

[2ab3a3ac] LogExpFunctions v0.2.4

[1914dd2f] MacroTools v0.5.6

[739be429] MbedTLS v1.0.3

[442fdcdd] Measures v0.3.1

[e1d29d7a] Missings v1.0.0

[78c3b35d] Mocking v0.7.1

[ffc61752] Mustache v1.0.10

[77ba4419] NaNMath v0.3.5

[6fe1bfb0] OffsetArrays v1.8.0

[bac558e1] OrderedCollections v1.4.1

[69de0a69] Parsers v1.1.0

[ccf2f8ad] PlotThemes v2.0.1

[995b91a9] PlotUtils v1.0.10

[91a5bcdd] Plots v1.15.2

[f27b6e38] Polynomials v1.2.1

[21216c6a] Preferences v1.2.2

[3cdcf5f2] RecipesBase v1.1.1

```
[01d81517] RecipesPipeline v0.3.2
```

[189a3867] Reexport v1.0.0

[ae029012] Requires v1.1.3

[30cb0354] SciMLTutorials v0.8.0

[6c6a2e73] Scratch v1.0.3

[992d4aef] Showoff v1.0.3

[b85f4697] SoftGlobalScope v1.1.0

[a2af1166] SortingAlgorithms v1.0.0

[276daf66] SpecialFunctions v1.4.1

[90137ffa] StaticArrays v1.2.0

[82ae8749] StatsAPI v1.0.0

[2913bbd2] StatsBase v0.33.8

[09ab397b] StructArrays v0.5.1

[3783bdb8] TableTraits v1.0.1

[bd369af6] Tables v1.4.2

[f269a46b] TimeZones v1.5.5

[5c2747f8] URIs v1.3.0

[81def892] VersionParsing v1.2.0

[44d3d7a6] Weave v0.10.8

[ddb6d928] YAML v0.4.6

[c2297ded] ZMQ v1.2.1

[6e34b625] Bzip2 jll v1.0.6+5

[83423d85] Cairo jll v1.16.0+6

[5ae413db] EarCut jll v2.1.5+1

[2e619515] Expat\_jll v2.2.10+0

[b22a6f82] FFMPEG jll v4.3.1+4

[f5851436] FFTW jll v3.3.9+7

[a3f928ae] Fontconfig jll v2.13.1+14

[d7e528f0] FreeType2 jll v2.10.1+5

[559328eb] FriBidi jll v1.0.5+6

[0656b61e] GLFW\_jll v3.3.4+0

[d2c73de3] GR jll v0.57.2+0

[78b55507] Gettext\_jll v0.21.0+0

[7746bdde] Glib jll v2.68.1+0

[1d5cc7b8] IntelOpenMP jll v2018.0.3+2

[aacddb02] JpegTurbo jll v2.0.1+3

[c1c5ebd0] LAME\_jll v3.100.0+3

[dd4b983a] LZO jll v2.10.0+3

[dd192d2f] LibVPX jll v1.9.0+1

[e9f186c6] Libffi\_jll v3.2.2+0

[d4300ac3] Libgcrypt\_jll v1.8.5+4

[7e76a0d4] Libglvnd jll v1.3.0+3

[7add5ba3] Libgpg\_error\_jll v1.36.0+3

[94ce4f54] Libiconv\_jll v1.16.1+0

[4b2f31a3] Libmount jll v2.35.0+0

[89763e89] Libtiff\_jll v4.1.0+2

[38a345b3] Libuuid\_jll v2.36.0+0

[856f044c] MKL\_jll v2021.1.1+1

[e7412a2a] Ogg jll v1.3.4+2

```
[2f80f16e] PCRE_jll v8.44.0+0
[30392449] Pixman_jll v0.40.0+0
[ea2cea3b] Qt5Base_jll v5.15.2+0
[a2964d1f] Wayland_jll v1.17.0+4
[2381bf8a] Wayland_protocols_jll v1.18.0+4
[02c8fc9c] XML2_jll v2.9.12+0
[aed1982a] XSLT_jll v1.1.33+4
[4f6342f7] Xorg_libX11_jll v1.6.9+4
[0c0b7dd1] Xorg_libXau_jll v1.0.9+4
```

[458c3c95] OpenSSL\_jll v1.1.1+6 [efe28fd5] OpenSpecFun jll v0.5.4+0

[91d4177d] Opus\_jll v1.3.1+3

[935fb764] Xorg\_libXcursor\_jll v1.2.0+4

[a3789734] Xorg\_libXdmcp\_jll v1.1.3+4

[1082639a] Xorg\_libXext\_jll v1.3.4+4 [d091e8ba] Xorg\_libXfixes\_jll v5.0.3+4

[a51aa0fd] Xorg\_libXi\_jll v1.7.10+4

[d1454406] Xorg\_libXinerama\_jll v1.1.4+4
[ec84b674] Xorg libXrandr jll v1.5.2+4

[ea2f1a96] Xorg libXrender jll v0.9.10+4

[14d82f49] Xorg\_libpthread\_stubs\_jll v0.1.0+3

[c7cfdc94] Xorg\_libxcb\_jll v1.13.0+3

[cc61e674] Xorg\_libxkbfile\_jll v1.1.0+4

[12413925] Xorg\_xcb\_util\_image\_jll v0.4.0+1

[2def613f] Xorg\_xcb\_util\_jll v0.4.0+1

[975044d2] Xorg\_xcb\_util\_keysyms\_jll v0.4.0+1

[Od47668e] Xorg\_xcb\_util\_renderutil\_jll v0.3.9+1

[c22f9ab0] Xorg\_xcb\_util\_wm\_jll v0.4.1+1

[35661453] Xorg\_xkbcomp\_jll v1.4.2+4

[33bec58e] Xorg\_xkeyboard\_config\_jll v2.27.0+4

[c5fb5394] Xorg\_xtrans\_jll v1.4.0+3

[8f1865be] ZeroMQ\_jll v4.3.2+6 [3161d3a3] Zstd\_jll v1.5.0+0

[0ac62f75] libass jll v0.14.0+4

[f638f0a6] libfdk\_aac\_jll v0.1.6+4

[b53b4c65] libpng\_jll v1.6.37+6

[a9144af2] libsodium\_jll v1.0.20+0

[f27f6e37] libvorbis\_jll v1.3.6+6

[1270edf5] x264\_jll v2020.7.14+2 [dfaa095f] x265\_jll v3.0.0+3

[d8fb68d0] xkbcommon\_jll v0.9.1+5

[Odad84c5] ArgTools

[56f22d72] Artifacts

[2a0f44e3] Base64 [ade2ca70] Dates

[8bb1440f] DelimitedFiles

[8ba89e20] Distributed

[f43a241f] Downloads

[7b1f6079] FileWatching

- [b77e0a4c] InteractiveUtils
- [4af54fe1] LazyArtifacts
- [b27032c2] LibCURL
- [76f85450] LibGit2
- [8f399da3] Libdl
- [37e2e46d] LinearAlgebra
- [56ddb016] Logging
- [d6f4376e] Markdown
- [a63ad114] Mmap
- [ca575930] NetworkOptions
- [44cfe95a] Pkg
- [de0858da] Printf
- [3fa0cd96] REPL
- [9a3f8284] Random
- [ea8e919c] SHA
- [9e88b42a] Serialization
- [1a1011a3] SharedArrays
- [6462fe0b] Sockets
- [2f01184e] SparseArrays
- [10745b16] Statistics
- [fa267f1f] TOML
- [a4e569a6] Tar
- [8dfed614] Test
- [cf7118a7] UUIDs
- [4ec0a83e] Unicode
- [e66e0078] CompilerSupportLibraries jll
- [deac9b47] LibCURL jll
- [29816b5a] LibSSH2 jll
- [c8ffd9c3] MbedTLS jll
- [14a3606d] MozillaCACerts jll
- [83775a58] Zlib\_jll
- [8e850ede] nghttp2 jll
- [3f19e933] p7zip\_jll