

Jak zainstalować Julie?

Jak zainstalować Julię?

- Pobieramy odpowiedni instalator ze [strony języka](#):

Install the latest Julia version (v1.11.0 October 7, 2024) from the [Microsoft Store](#) by running this in the command prompt:

```
> winget install julia -s msstore
```

COPY

It looks like you're using Windows. For Linux and MacOS instructions [click here](#)

Once installed `julia` will be available via the command line interface.

This will install the [Juliaup](#) installation manager, which will automatically install julia and help keep it up to date. The command `juliaup` is also installed. To install different julia versions see `juliaup --help`.

Jak zainstalować Julię?

- Używać będziemy wersji **1.11.0**

Install the latest Julia version (v1.11.0 October 7, 2024) from the [Microsoft Store](#) by running this in the command prompt:

```
> winget install julia -s msstore
```

COPY

It looks like you're using Windows. For Linux and MacOS instructions [click here](#)

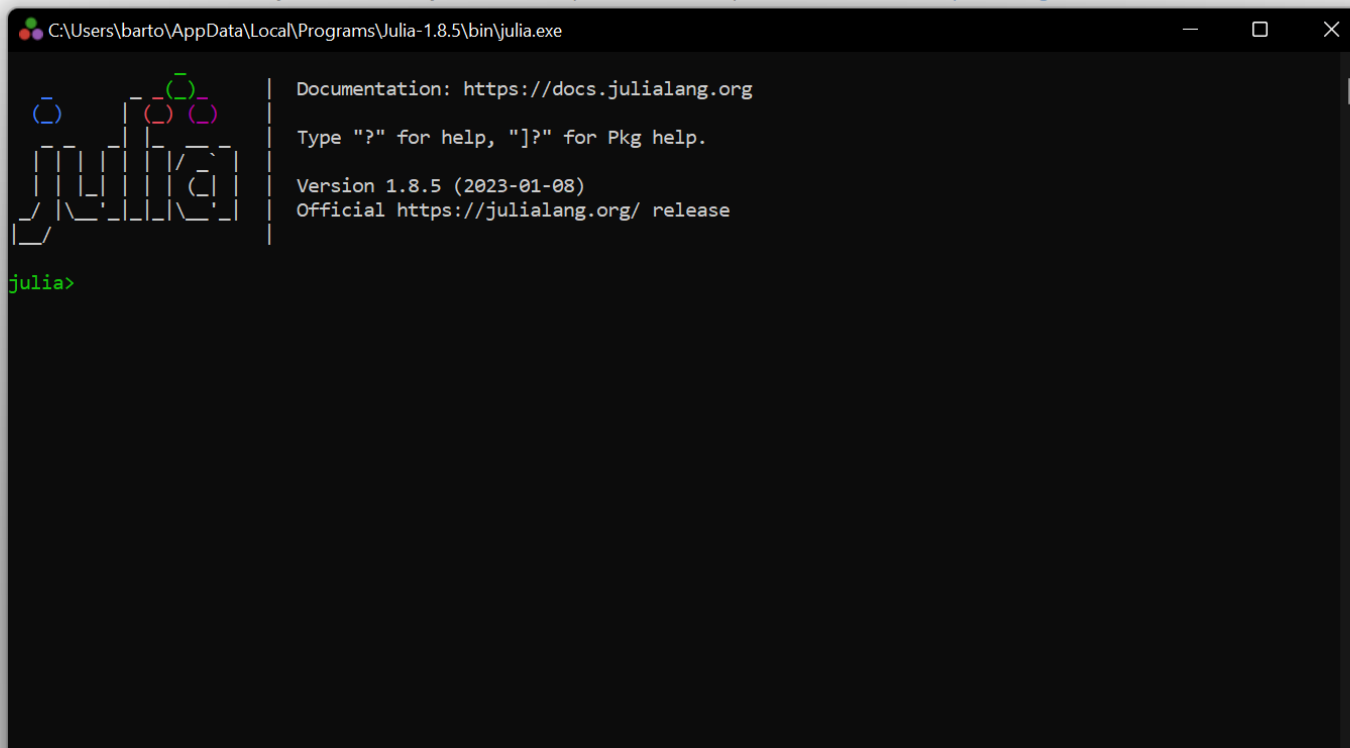
Once installed **julia** will be available via the command line interface.

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Jak skonfigurować Julię?

- Następnie możemy zacząć konfigurować język do pracy na zajęciach.
- Uruchommy **REPLa**:

Please star us [on GitHub](#). If you use Julia in your research, please [cite us](#). If possible, do consider [sponsoring us](#).

A screenshot of the Julia REPL (Read-Eval-Print Loop) window. The window title is "C:\Users\barto\AppData\Local\Programs\Julia-1.8.5\bin\julia.exe". The window content shows the Julia logo on the left and the following text on the right: "Documentation: https://docs.julialang.org", "Type '?' for help, ']' for Pkg help.", "Version 1.8.5 (2023-01-08)", and "Official https://julialang.org/ release". At the bottom left, the prompt "julia>" is visible.

```
C:\Users\barto\AppData\Local\Programs\Julia-1.8.5\bin\julia.exe

Documentation: https://docs.julialang.org
Type "?" for help, "]" for Pkg help.
Version 1.8.5 (2023-01-08)
Official https://julialang.org/ release

julia>
```

portable)

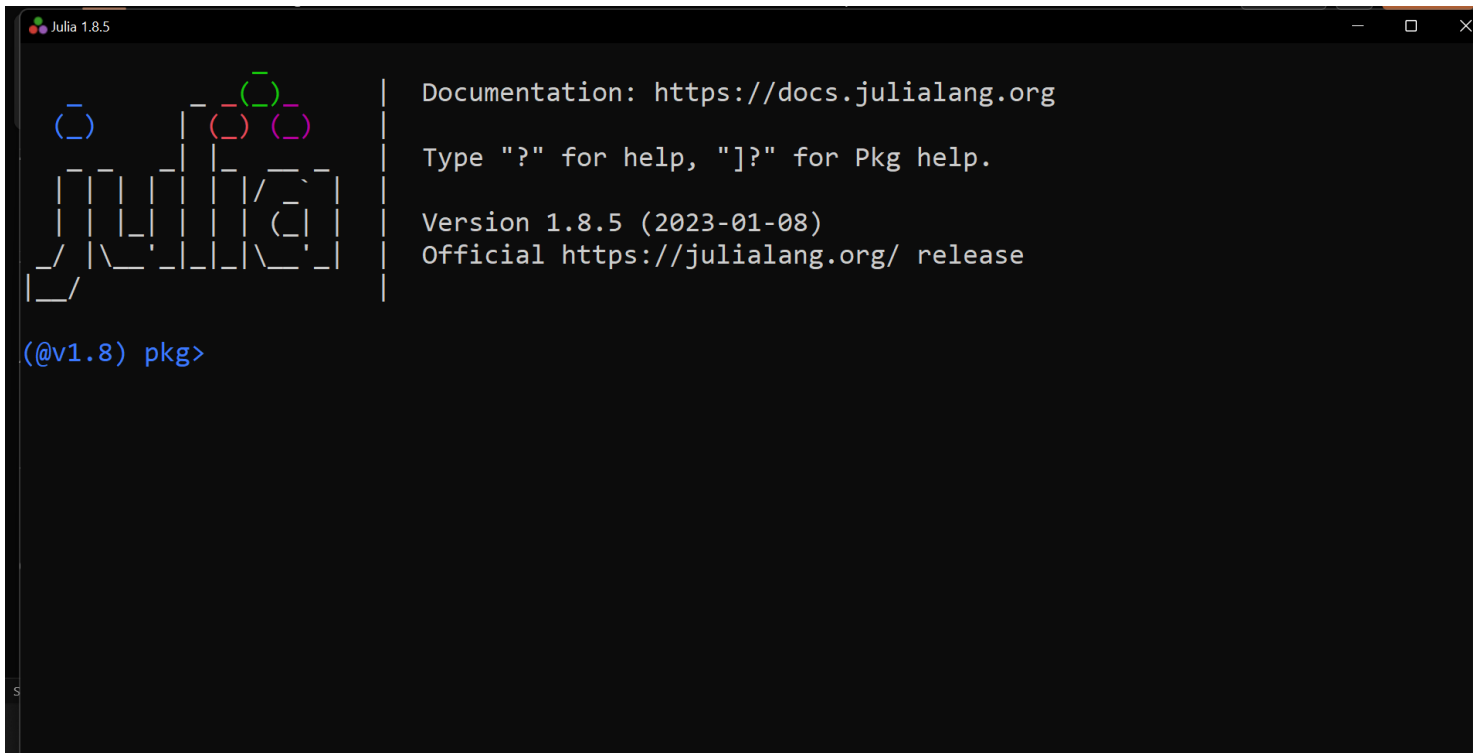
GitHub

Julia versions, so



Jak skonfigurować Julię?

- Zaczniemy instalować potrzebne paczki.
- Można to zrobić na dwa sposoby:
 - Albo poprzez wpisanie “]” i przejście do menagera paczek (znacznik zmieni się wtedy na niebieski):

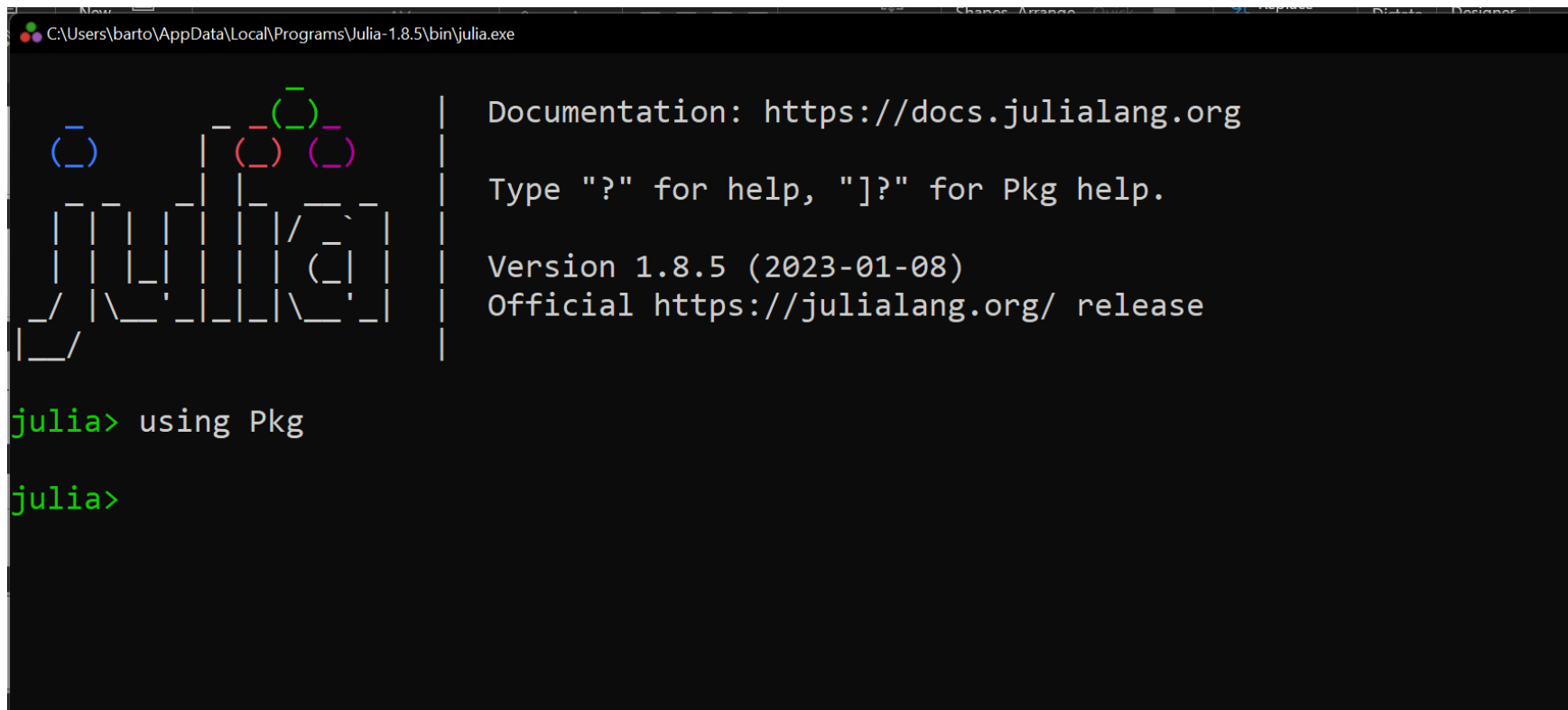
A screenshot of the Julia REPL window. The title bar shows 'Julia 1.8.5'. On the left, there is a stylized ASCII art logo of the word 'Julia' with colored brackets above it. The main area displays the following text: 'Documentation: https://docs.julialang.org', 'Type "?" for help, "]"? for Pkg help.', 'Version 1.8.5 (2023-01-08)', and 'Official https://julialang.org/ release'. At the bottom, the prompt '(@v1.8) pkg>' is shown in blue text.

```
Documentation: https://docs.julialang.org
Type "?" for help, "]"? for Pkg help.
Version 1.8.5 (2023-01-08)
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(@v1.8) pkg>
```

Jak skonfigurować Julię?

- Zaczniemy instalować potrzebne paczki.
- Można to zrobić na dwa sposoby:
 - Albo poprzez wywołanie biblioteki “**Pkg**”:

A screenshot of the Julia REPL (Read-Eval-Print Loop) interface. The window title is "C:\Users\barto\AppData\Local\Programs\Julia-1.8.5\bin\julia.exe". The left pane shows the Julia logo and a stylized representation of the Pkg.jl package manager. The right pane displays the following text: "Documentation: <https://docs.julialang.org>", "Type '?' for help, ']?' for Pkg help.", "Version 1.8.5 (2023-01-08)", and "Official <https://julialang.org/> release". The command prompt shows the user entering "julia> using Pkg" and then "julia>".

```
C:\Users\barto\AppData\Local\Programs\Julia-1.8.5\bin\julia.exe

Documentation: https://docs.julialang.org

Type "?" for help, "]?" for Pkg help.

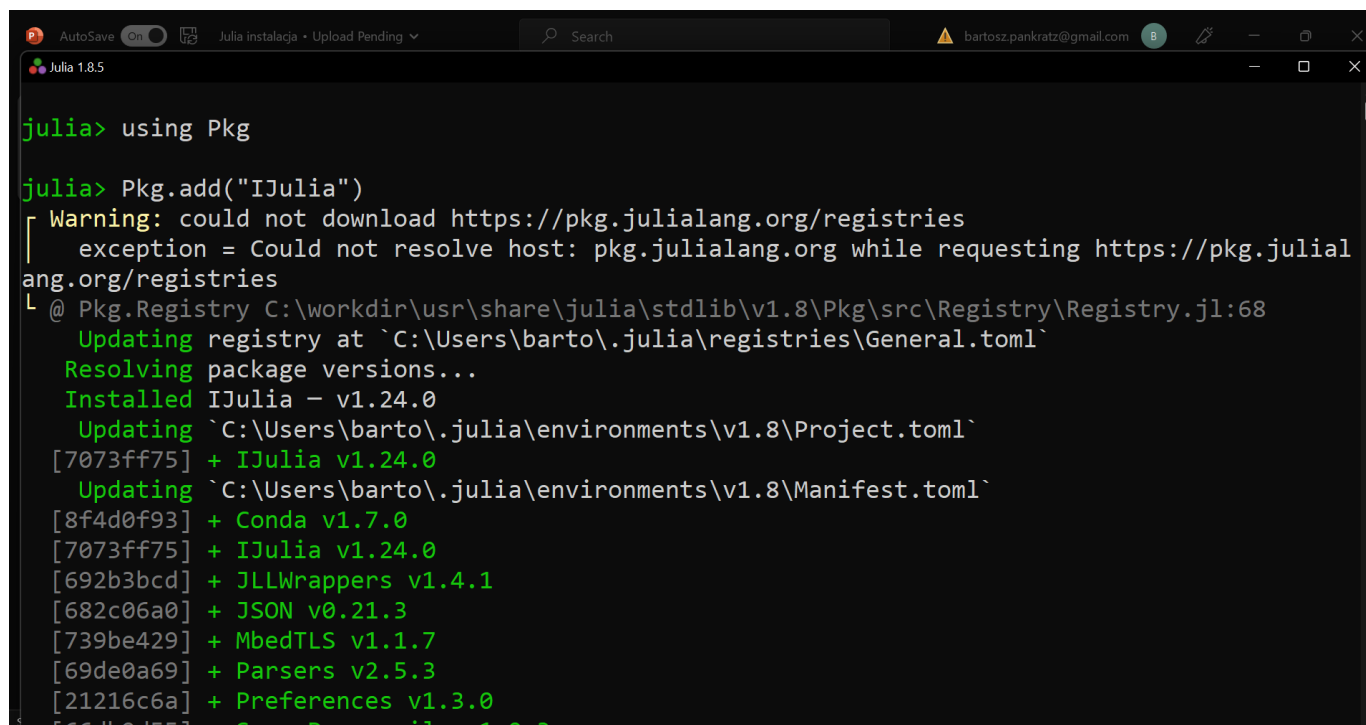
Version 1.8.5 (2023-01-08)
Official https://julialang.org/ release

julia> using Pkg

julia>
```

Jak skonfigurować Julię?

- Zaczniemy od skonfigurowania biblioteki "IJulia".
- Pozwoli ona uruchamiać kod Julii w Jupyter Notebookach. Aby móc uruchamiać taki kod, konieczne jest poprawne skonfigurowanie środowiska Jupyter. Dodajmy bibliotekę:



```
julia> using Pkg

julia> Pkg.add("IJulia")
[ Warning: could not download https://pkg.julialang.org/registries
  exception = Could not resolve host: pkg.julialang.org while requesting https://pkg.julialang.org/registries
]
@ Pkg.Registry C:\workdir\usr\share\julia\stdlib\v1.8\Pkg\src\Registry\Registry.jl:68
  Updating registry at `C:\Users\barto\.julia\registries\General.toml`
  Resolving package versions...
  Installed IJulia - v1.24.0
  Updating `C:\Users\barto\.julia\environments\v1.8\Project.toml`
[7073ff75] + IJulia v1.24.0
  Updating `C:\Users\barto\.julia\environments\v1.8\Manifest.toml`
[8f4d0f93] + Conda v1.7.0
[7073ff75] + IJulia v1.24.0
[692b3bcd] + JLLWrappers v1.4.1
[682c06a0] + JSON v0.21.3
[739be429] + MbedTLS v1.1.7
[69de0a69] + Parsers v2.5.3
[21216c6a] + Preferences v1.3.0
[56db0d55] + ProgressBars v1.0.2
```

Jak skonfigurować Julię?

- Dodajmy bibliotekę "PyCall".
- Pozwoli ona uruchamiać kod Pythona na poziomie Julii:

```
julia> Pkg.add("PyCall")
  Resolving package versions...
  Installed PyCall - v1.95.1
  Updating `C:\Users\barto\.julia\environments\v1.8\Project.toml`
[438e738f] + PyCall v1.95.1
  Updating `C:\Users\barto\.julia\environments\v1.8\Manifest.toml`
[1914dd2f] + MacroTools v0.5.10
[438e738f] + PyCall v1.95.1
[37e2e46d] + LinearAlgebra
[e66e0078] + CompilerSupportLibraries_jll v1.0.1+0
[4536629a] + OpenBLAS_jll v0.3.20+0
[8e850b90] + libblastrampoline_jll v5.1.1+0
  Building PyCall → `C:\Users\barto\.julia\scratchspaces\44cfe95a-1eb2-52ea-b672-e2afdf69b78f\62f417f6ad727987c755549e9cd88c46578da562\build.log`
  Precompiling project...
  5 dependencies successfully precompiled in 10 seconds. 16 already precompiled.

julia> _
```


Jak skonfigurować Julię?

- Bardzo często w przypadku biblioteki "**PyCall**" konieczne jest ręczne określenie wersji Pythona do której ma odwoływać się Julia. Aby to zrobić należy wpisać ścieżkę, w której znajduje się preferowana dystrybucja Pythona i przebudować paczkę "**PyCall**":

```
ENV["PYTHON"] = "... path of the python executable ..."  
# ENV["PYTHON"] = raw"C:\Python310-x64\python.exe" # example for Windows, "raw" to not have to escape: "C:\\P  
  
# ENV["PYTHON"] = "/usr/bin/python3.10" # example for *nix  
Pkg.build("PyCall")
```

Jak skonfigurować Julię?

- W przypadku bazowej Anacondy na Windowsie:

```
julia> ENV["PYTHON"] = "C:\\Users\\barto\\Anaconda3\\python.exe"
"C:\\Users\\barto\\Anaconda3\\python.exe"

julia> Pkg.build("PyCall")
  Building Conda → `C:\\Users\\barto\\.julia\\scratchspaces\\44cfe95a-1eb2-52ea-b672-e2afdf69b78f\\6e47d11ea2776bc5627421d59cdcc1296c058071\\build.log`
  Building PyCall → `C:\\Users\\barto\\.julia\\scratchspaces\\44cfe95a-1eb2-52ea-b672-e2afdf69b78f\\62f417f6ad727987c755549e9cd88c46578da562\\build.log`
Precompiling project...
 1 dependency successfully precompiled in 8 seconds. 20 already precompiled.
```

Jak skonfigurować Julię?

- Biblioteki można też instalować wymuszając ich specyficzną wersję:

```
julia> Pkg.add(name = "DataFrames", version = "1.3.6")  
  Resolving package versions...  
No Changes to `C:\Users\barto\.julia\environments\v1.8\Project.toml`  
No Changes to `C:\Users\barto\.julia\environments\v1.8\Manifest.toml`
```

Jak skonfigurować Julię?

- Można też podejrzeć jakie biblioteki i jakie ich wersję są zainstalowane korzystając z polecenia “**Pkg.status()**”:

```
julia> Pkg.status()
Status `C:\Users\barto\.julia\environments\v1.8\Project.toml`
 [b7f77d8d] ArcadeLearningEnvironment v0.2.4
 [fbb218c0] BSON v0.3.6
 [a93c6f00] DataFrames v1.3.6
 [587475ba] Flux v0.13.4
 [e15a9946] GridWorlds v0.5.0
 [7073ff75] IJulia v1.24.0
 [a09fc81d] ImageCore v0.9.4
 [916415d5] Images v0.25.2
 [91a5bcd] Plots v1.38.2
 [438e738f] PyCall v1.95.1
 [d330b81b] PyPlot v2.11.0
 [158674fc] ReinforcementLearning v0.10.1
 [e575027e] ReinforcementLearningBase v0.9.7
 [25e41dd2] ReinforcementLearningEnvironments v0.6.12
Info Packages marked with [?] and [?] have new versions available, but those with [?] are restricted
by compatibility constraints from upgrading. To see why use `status --outdated`
```

Jak skonfigurować Julię?

- W trakcie semestru będziemy potrzebowali następujących bibliotek:
 - **BSON** v0.3.9
 - **CUDA** v5.5.2
 - **DSP** v0.7.10
 - **DataFrames** v1.7.0
 - **Flux** v0.14.22
 - **IJulia** v1.25.0
 - **ImageCore** v0.10.2
 - **Images** v0.26.1
 - **JLD2** v0.4.53
 - **LaTeXStrings** v1.3.1
 - **MLDatasets** v0.7.18
 - **Metalhead** v0.9.4
 - **Optimisers** v0.3.3
 - **ParameterSchedulers** v0.4.2
 - **Plots** v1.40.7
 - **PyCall** v1.96.4
 - **StatsBase** v0.34.2
 - **TestImages** v1.8.0
 - **WAV** v1.2.0
 - **Zygote** v0.6.71