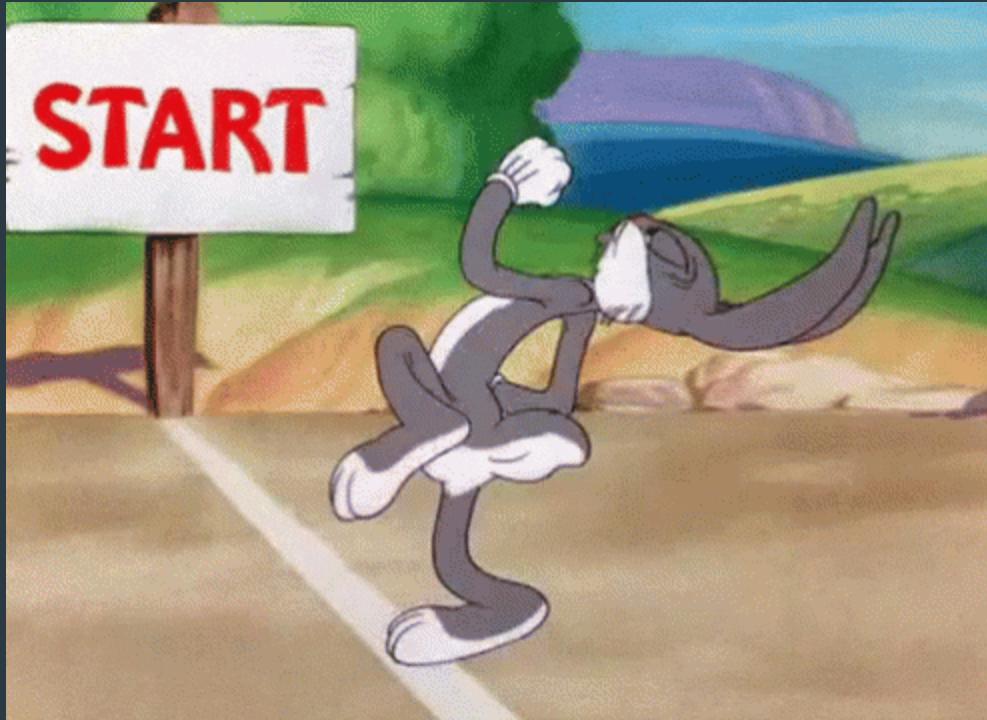


PowerShell

It is probably more useful than you think 😊

<https://powershell.surge.sh>





Before we begin...

How to Assess a Language



People

| *How well is the language supported?*



Platforms

| *Where can the language be used?*



Paradigms

| *What programming paradigms does the language support?*

What is PowerShell?

...a cross-platform (Windows, Linux, and macOS) automation and configuration tool/framework that works well with your existing tools and is optimized for dealing with structured data (e.g. JSON, CSV, XML, etc.), REST APIs, and object models. It includes a command-line shell, an associated scripting language and a framework for processing cmdlets. [PowerShell GitHub Page](#)

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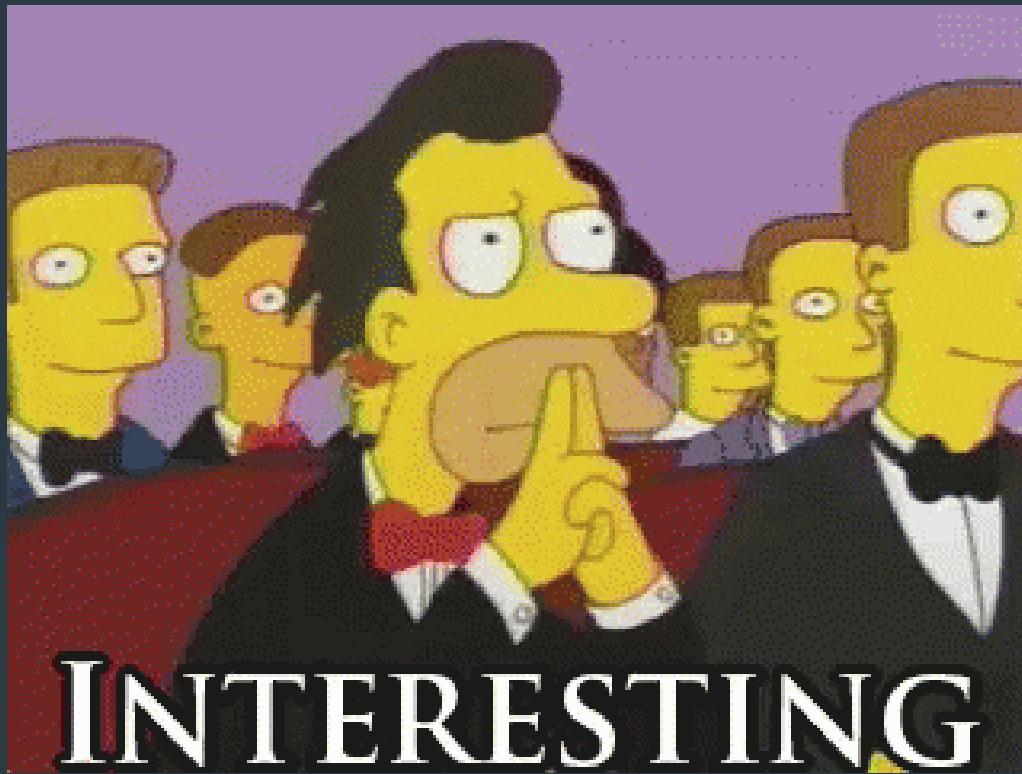
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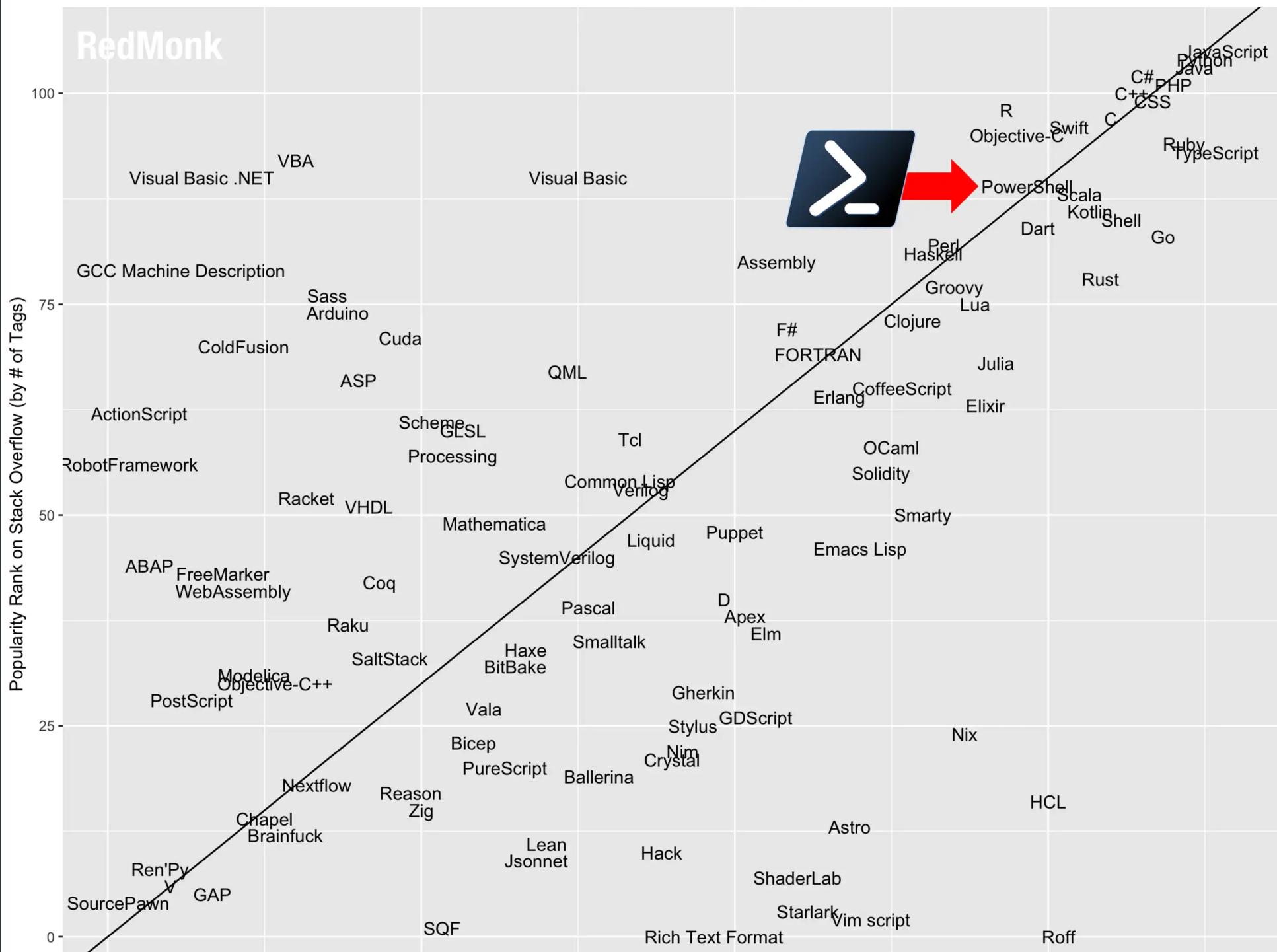
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In other words, PowerShell is...

A user-focused typed programming language with native access to the host system and built-in support for structured data — available on Windows/Linux/Mac, pre-installed on Windows. J. Wohlgemuth



RedMonk Q124 Programming Language Rankings



Samples

```
$credential = Get-ChildItem Cert:\CurrentUser\My | ? { $_.FriendlyName -like "Digital Signature" }
```



```
$Name = (Get-WmiObject Win32_VideoController).name
```

Copy

```
Get-ItemProperty HKLM:\SOFTWARE\WOW6432Node\Microsoft\Windows\CurrentVersion\Uninstall\* |  
Select-Object DisplayName, DisplayVersion, Publisher, InstallDate |  
Sort-Object DisplayName |  
Where-Object { $_.DisplayName.Length -gt 0 } |  
Format-Table -AutoSize
```

Copy

```
Install-Module -Name Prelude -Scope CurrentUser
```

Copy

Why PowerShell?

Why PowerShell?



Structured Data Support

Why PowerShell?



Structured Data Support

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Developer Experience (DX)

Why PowerShell?



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Developer Experience (DX)



Cross Platform Support

Why PowerShell?



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Developer Experience (DX)



Cross Platform Support



Open Source



Structured Data Support

❖ Built-in XML support ❖

```
<Barrel>
  <Monkey Action="no-see">🙈</Monkey>
  <Monkey Action="no-hear">🙉</Monkey>
  <Monkey Action="no-speak">🙊</Monkey>
</Barrel>
```

Copy

```
# import data
[XML]$data = Get-Content -Path data.xml

# get information
$data.Barrel.Monkey.Count | Write-Host
```

Copy



Structured Data Support

❖ Built-in CSV support ❖

```
name,power,race,super
Goku,9001,Saiyan,yes
Gohan,3042,Hybrid,yes
Vegeta,8999,Saiyan,yes
Trunks,8500,Hybrid,yes
Picollo,8001,Namekian,no
Krillin,1000,Human,no
Yamcha,1,Human,no
```

Copy

```
# import data
$data = ConvertFrom-Csv (Get-Content -Path data.csv)

# get column
$data.name | Write-Host

# get row
$data[0] | Write-Host
```

Co



Structured Data Support

❖ Built-in CSV support ❖

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name,power,race,super
Goku,9001,Saiyan,yes
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Copy

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Co

PowerShell ❤️ dotnet



PowerShell ❤️ dotnet

```
# import the code
Add-Type -TypeDefintion "
    using System;
    public class Calculator {
        public static double ToRadians(int degrees) {
            return degrees * (Math.PI / 180);
        }
    }
"

# use the code
[Calculator]::ToRadians(360)
```

Copy

PowerShell ❤️ dotnet

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Copy

❖ Also works with dynamic linked libraries ❖



Developer Experience (DX)



Documentation / Get-Help <cmdlet>



Mature workflows (lint, test, build etc...)



Windows Terminal #cantBelieveItsNotLinux

```
pwsh in slides-powershell-is-awesome + - X
slides-powershell-is-awesome ➜ ls

Directory: C:\Users\jason\dev\slides-powershell-is-awesome

Mode LastWriteTime Length Name
---- --          --      --
d--- 8/31/2024  9:46 AM .github
d--- 8/31/2024  9:46 AM .vscode
d--- 8/31/2024  10:44 AM assets
d--- 8/31/2024  9:46 AM dist
d--- 8/31/2024  10:33 AM node_modules
d--- 8/31/2024  9:46 AM slides
-a-- 8/31/2024  9:46 AM 430 .fusumarc.yml
-a-- 8/31/2024  9:46 AM 24 .gitignore
-a-- 8/31/2024  10:33 AM 1212283 package-lock.json
-a-- 8/31/2024  9:48 AM 915 package.json
-a-- 8/31/2024  9:46 AM 2244 prism.css
-a-- 8/31/2024  9:46 AM 32261 prism.js
-a-- 8/31/2024  9:46 AM 94 README.md
-a-- 8/31/2024  9:46 AM 1595426 slides.pdf
-a-- 8/31/2024  9:46 AM 1957 style.css

jason ➜ slides-powershell-is-awesome ➜ master ➜ ~3 ➜ ✅ | @ v16.20.2 in pwsh at 10:56:43
```



Cross platform

```
docker run -it mcr.microsoft.com/powershell
```

Copy



Open Source

<https://github.com/PowerShell/PowerShell>