

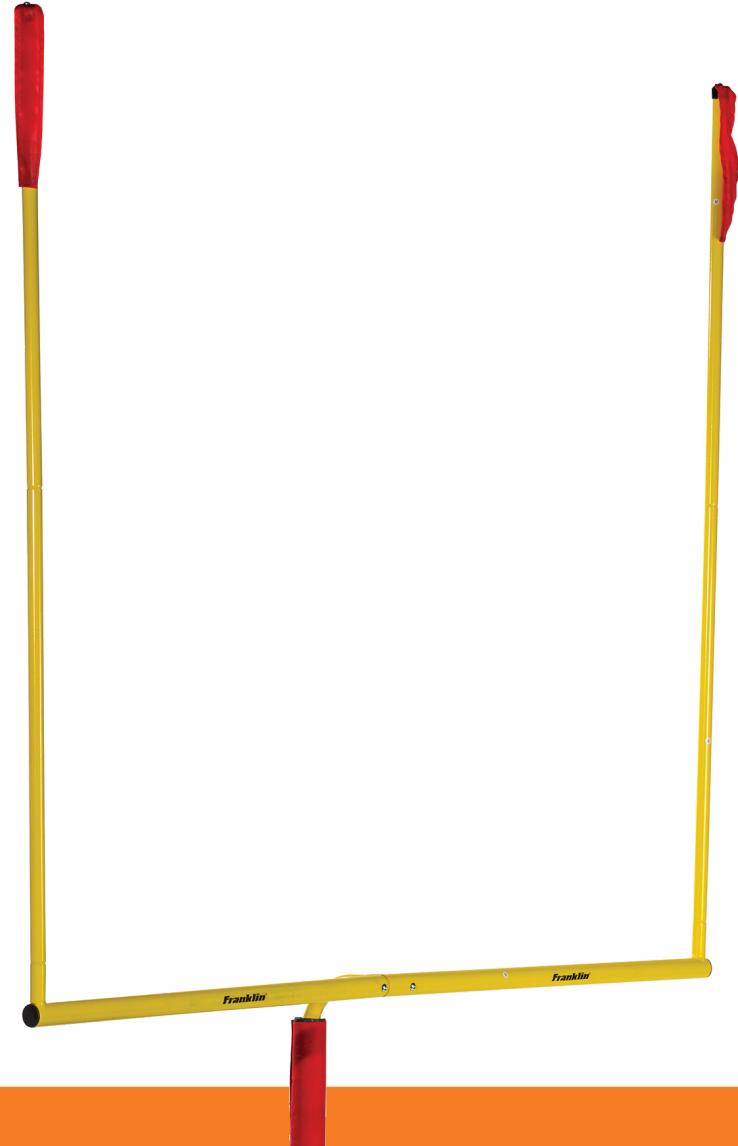
The Big Picture





Goals

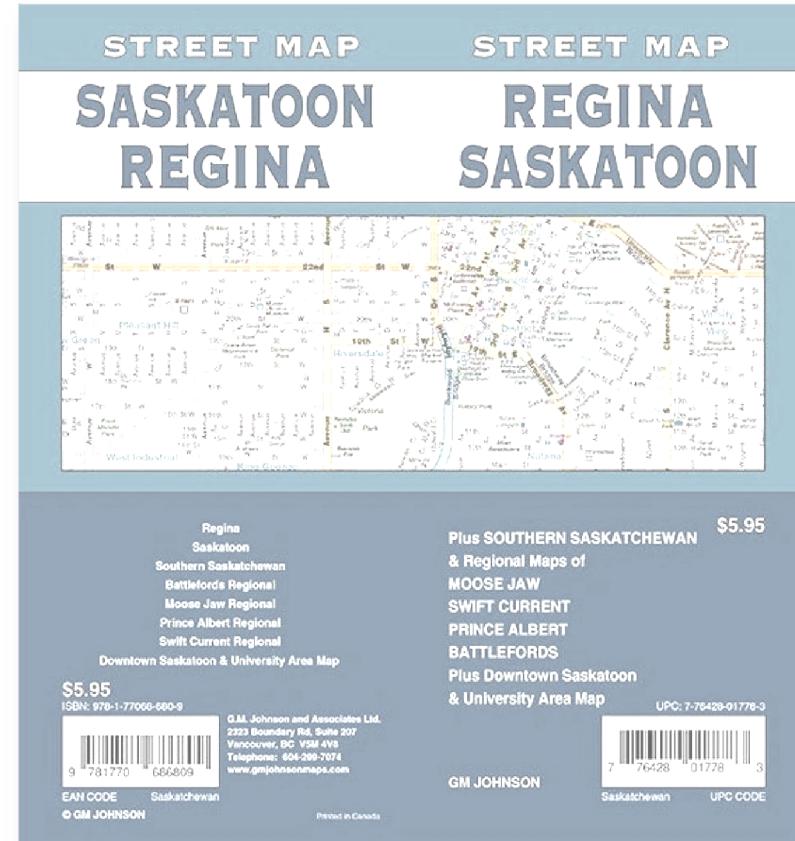
1. List 2 versions of Powershell
2. Compare Powershell with similar tools
3. Name 1 cool thing about Powershell





Roadmap

1. History
2. Comparisons
3. Kudos
4. Complaints
5. Resources

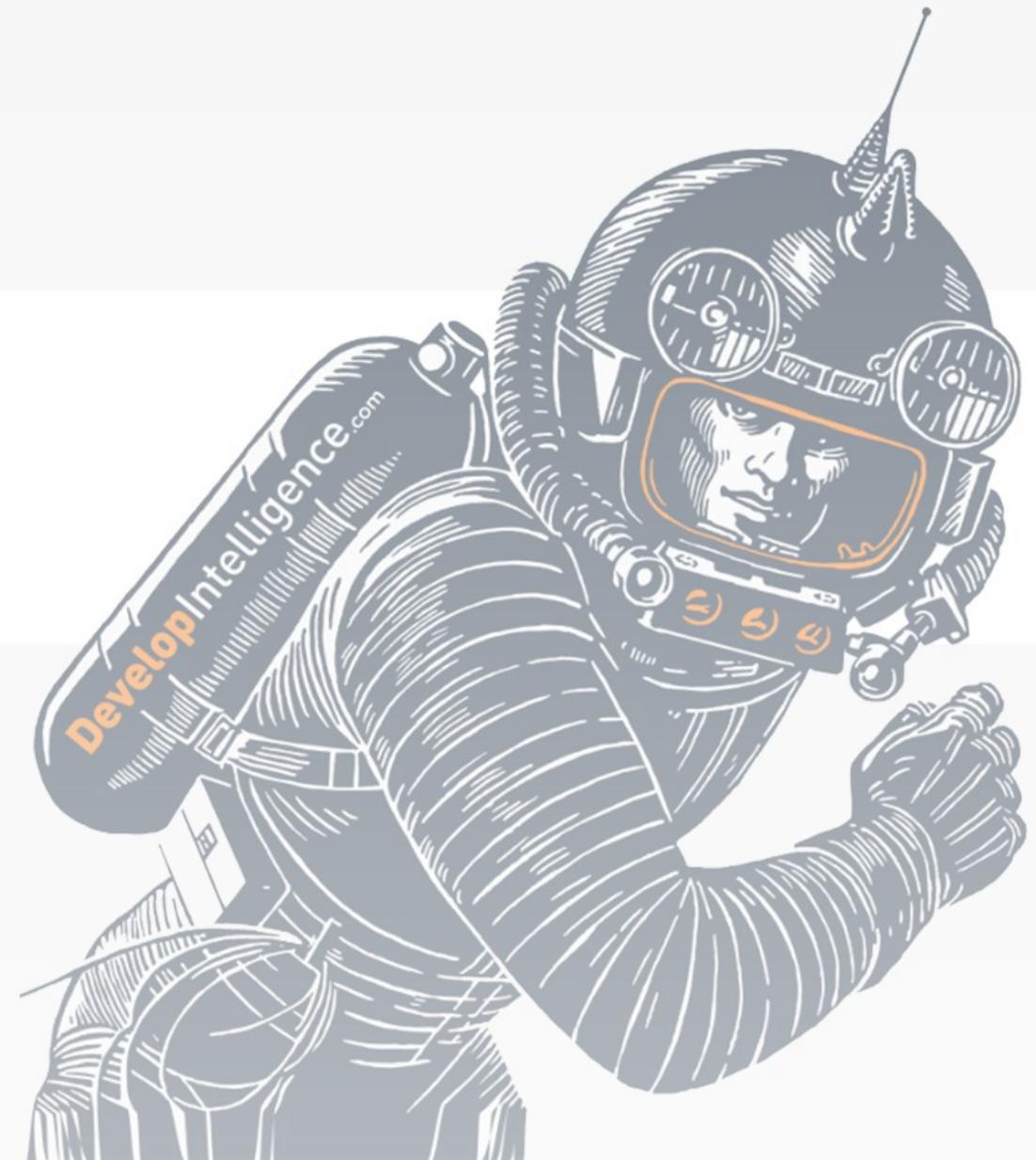




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History





Overview

- Replacement for Cmd.exe
- Originally known as Monad
- Architect: Jeffrey P. Snover
- First release: 2007



Windows PowerShell



- .NET-Based
- Broad support
- Does everything

```
1 Add-Type -TypeDefintion @"
2 public static class Mathy{
3     public static int Add(int a, int b){
4         return (a + b);
5     }
6 }
7 @@
8 [Mathy]::Add(5,19)
```



Powershell Core



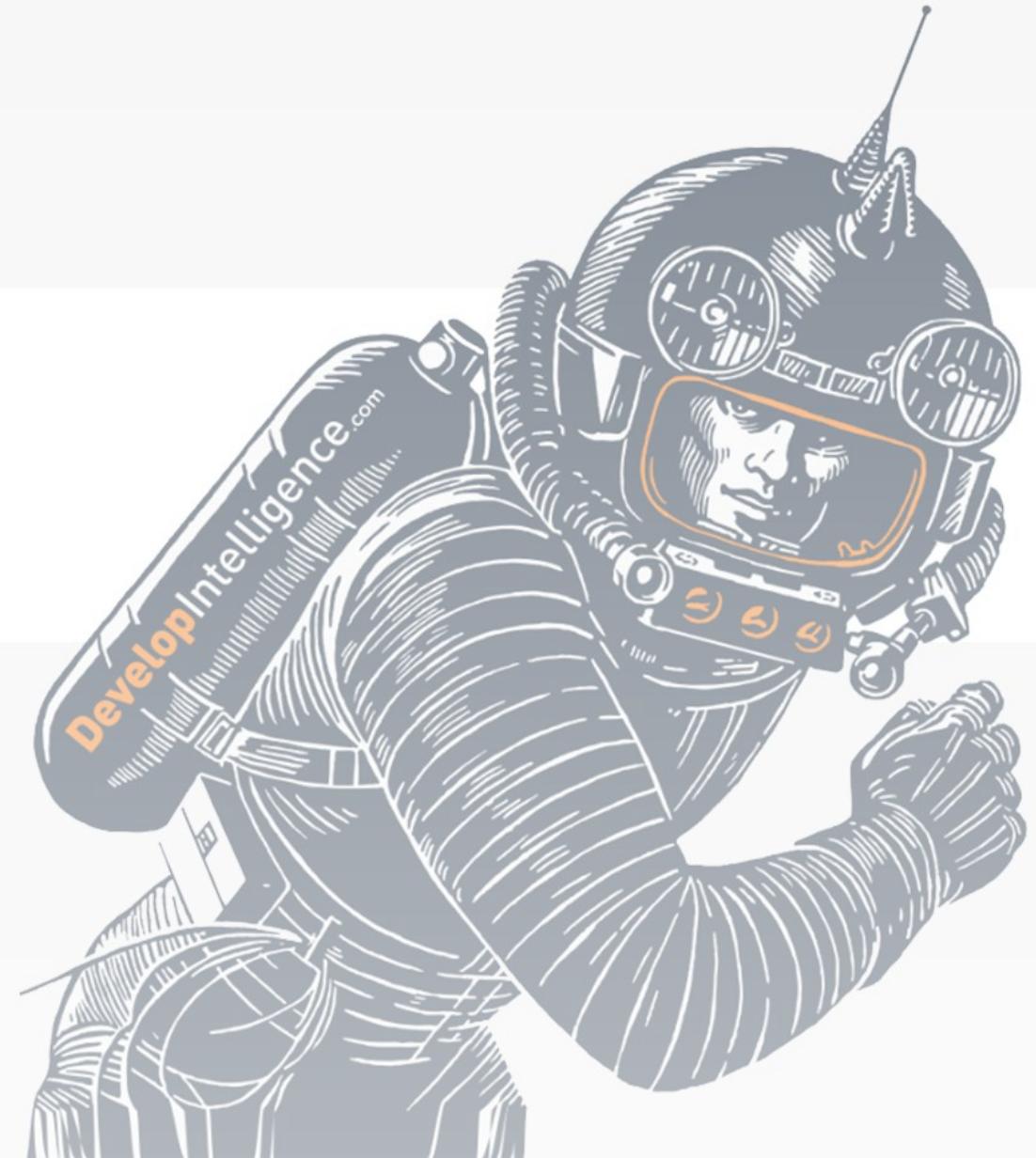
- First release: 2016
- Replaces legacy version
- Open source
- Cross platform
 - Windows
 - Linux
 - OSX
 - Docker



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Comparisons





Cmd.exe

- Legacy Windows terminal
- Text-oriented
- Coordinates applications
- Capabilities
 - **Terminal**  
 - **Scripting**  
 - **App Dev**  



Bash

- Standard Linux terminal
- Text-oriented
- Coordinates applications
- Capabilities
 - **Terminal**  
 - **Scripting**  
 - **App Dev**  



Python

- Ubiquitous scripting language
- Object-oriented
- Lots of libraries
- Capabilities
 - **Terminal** ★☆☆☆☆
 - **Scripting** ★★★☆☆
 - **App Dev** ★★★★★



Powershell

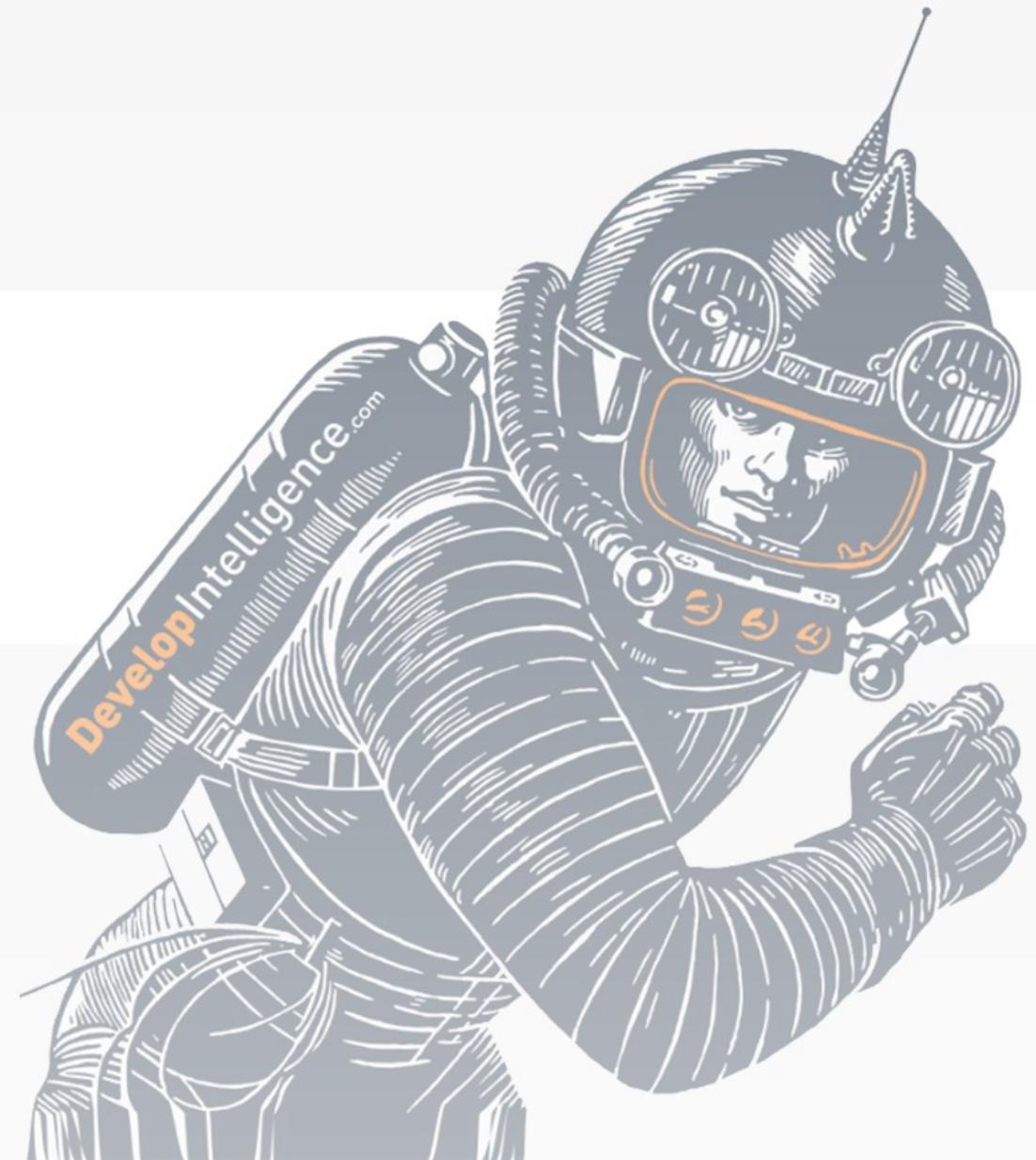
- Mostly windows
- Object-oriented
- Capabilities
 - Terminal
 - Scripting
 - App Dev



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Kudos





Powerful

- Fancy find-and-replace script

```
1 function fix-slidebreaks($path){  
2     (Get-Content $path -Raw) -replace '(?ms)\s^(?=#[1,3]\s)', "---`n`n" |  
3         Out-File $path  
4 }  
5  
6 Get-Item ./src/content/ |  
7     Get-ChildItem -Recurse -Filter content.mdx |  
8     %{fix-slidebreaks $_}
```



Ergonomic

- Verb-noun makes it easy to read
 - Unlike dir, cat, set, grep
- Help system
- Tab completion
- Great tooling
 - Windows terminal
 - VSCode



Useful

- Automates boring stuff

```
1 npm run ssr
2 cd dist
3 # By default, github pages ignores folders prefixed with underscores.
4 echo '' >> .nojekyll
5
6 # This is so the custom domain setting won't get clobbered
7 echo 'bathcat.net' >> CNAME
8
9 git init
10 git add -A
11 git commit -m 'deploy'
12
13 git push -f https://github.com/bathcat/bathcat.github.io +master
```



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Complaints





Platforms Aren't the same



- Windows only functionality
 - Get-ComputerInfo
 - Get-Service
 - WMI/CIM Stuff
 - Scheduled jobs
 - Remoting
- Commands on windows: **1603**
- Commands on ubuntu: **354**



Goofy Syntax



- Sigils
- Array unrolling
- Drive weirdness



Small Community



- Install base
- StackOverflow answers
- Tooling



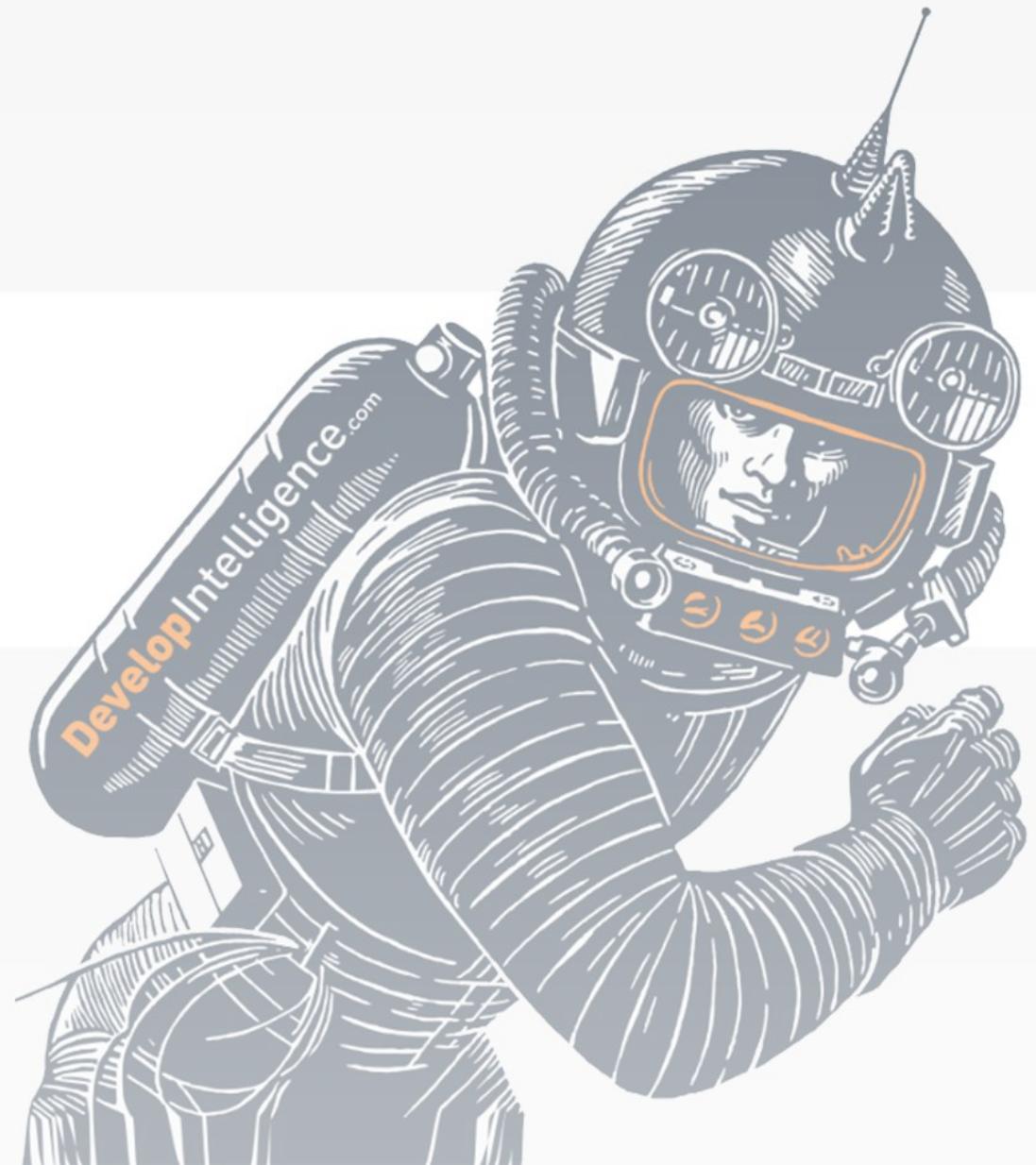
Upper Size Limit



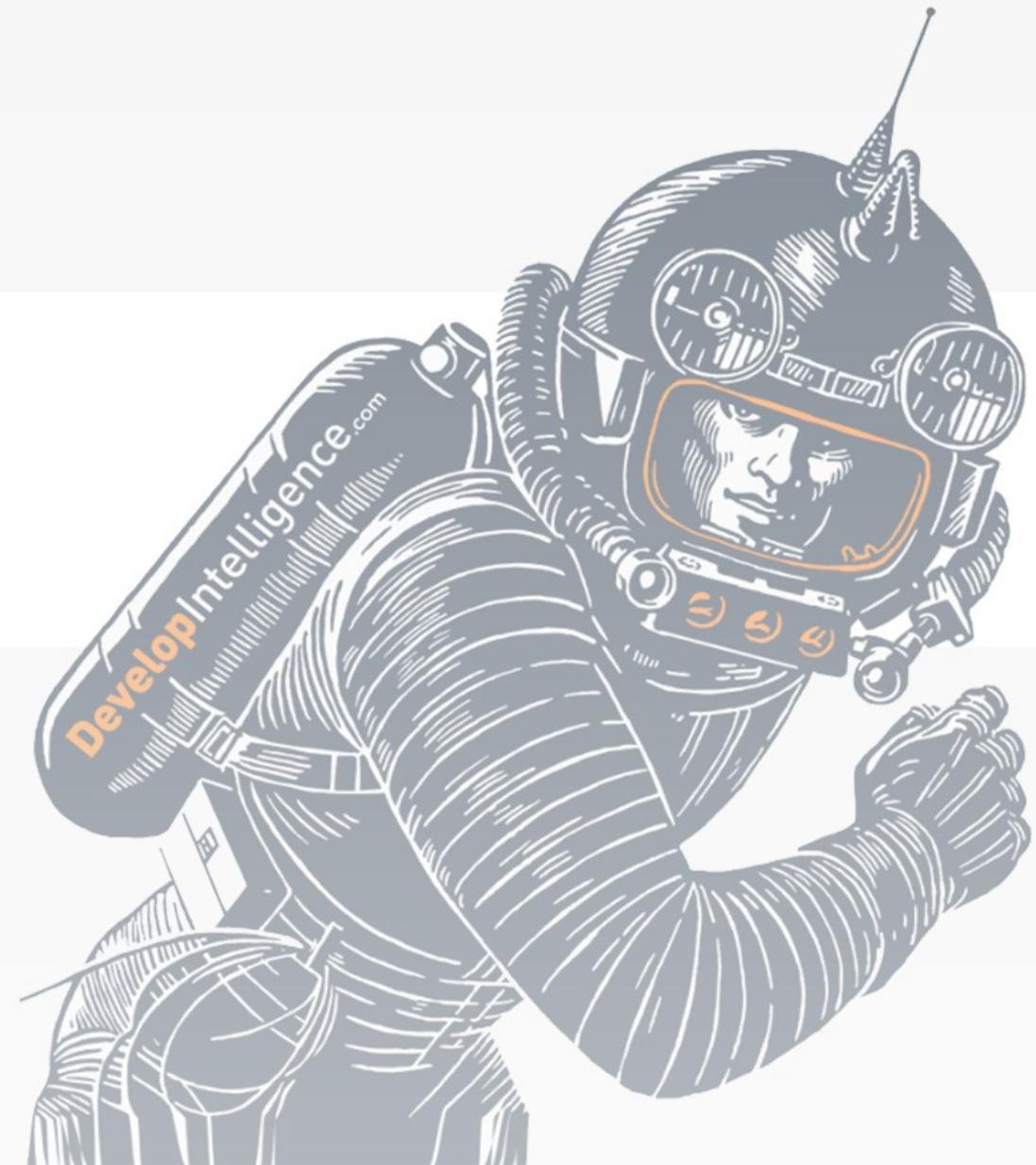
- Don't use it to write a web app
- < 1000 lines



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Resources





Reading

- [AdamTheAutomator.com](#)
- [Reddit](#)
- [PowerShell Practice and Style](#)
- [SYSADMIN Channel](#)



Exercises

- Koans
- Project Euler



Tools

- PowerShell
- Pester
- Windows Terminal
- VS Code
 - PowerShell Language Support
- Git



Lab: Whirlwind Tour



- Read instructions: `$/labs/README.md`
- Walk through the labs and demos, make sure you them





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Review

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