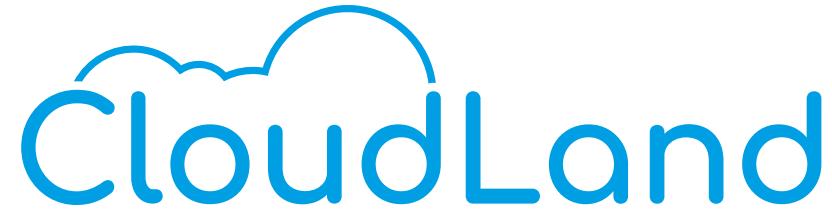




modern linux cli tools

Patrick Drechsler



"modern" is relative...

Douglas Adams

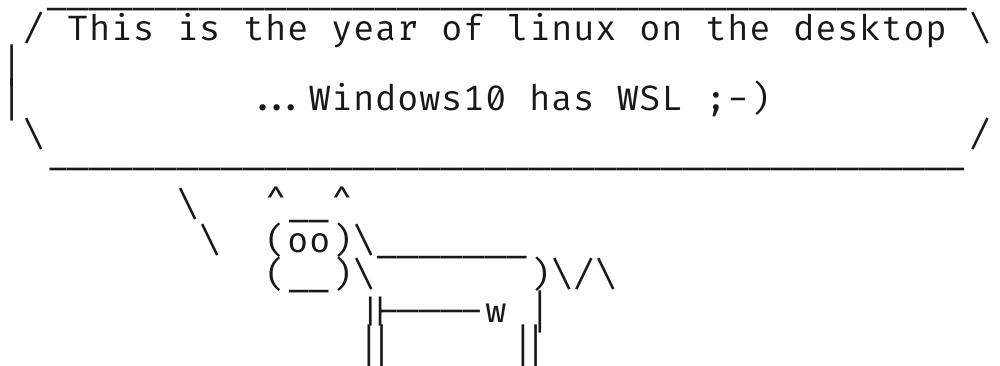
I've come up with a set of rules that describe our reactions to technologies:

- Anything that is in the world **when you're born** is normal and ordinary and is just a natural part of the way the world works.
- Anything that's invented **between when you're fifteen and thirty-five** is new and exciting and revolutionary and you can probably get a career in it.
- Anything invented **after you're thirty-five** is against the natural order of things.



Target audience

- linux desktop CLI users
- linux admins
- docker users
- devops/cloud users
- ...



Linux tooling philosophy

- do one thing (and only one thing!) well
- chaining
- *sound familiar? (hint: functional programming...)*

Why? Improvements to...

- **productivity**
 - one cli command is better than multiple clicks in a GUI
- **optics**
 - "unix porn" (`~PS1``, ``ls``, ...)

Learn the basics

VS Code is cool, but it is not a CLI tool

- Emacs and Vim:
 - navigation within file
 - cut, copy & paste
 - navigation between files
 - and how to exit
 - pick one and become fluent
- Learn basic cli commands: `cd`, `ls`, `cat`,
`less`, `find`, `grep`, `sed`, `tail`, `awk`,
`dd`, `rsync`, ...
- Combine using pipes and redirection



Disclaimer



Pets

Cattle



terminal and shell: what's the difference?



terminal

- colors (16 or more),
- fonts (utf8, ligatures, emojis, ...)
- interactions
 - keyboard shortcuts
 - mouse interaction (copy & paste, scrolling, selection, ...)

shell

- everything else (f.ex. `PS1`, scripting language)

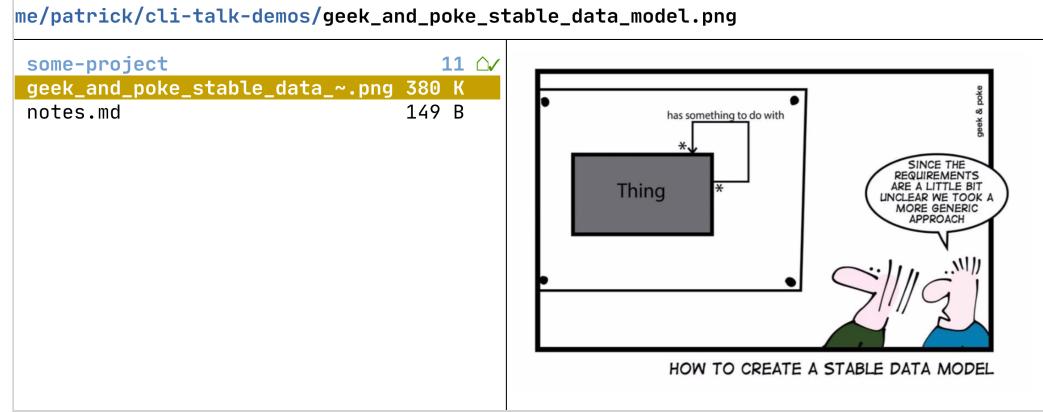
terminal

What is the best terminal?

- start by using your default terminal

but think about enriching your output!

- Emojis: € ★
- Unicode, Emojis, Fonts, Image support (!)



The terminal window shows a directory listing with file icons:

```
some-project on [?] main .NET v5.0.204 [?] net5.0
> ls
rwxr-xr-X  1 patrick    10 B   Tue Jun 15 20:30:51 2021
rwxr-xr-X  1 patrick   182 B   Tue Jun 15 20:32:20 2021
rwxr-xr-X  1 patrick   414 B   Tue Jun 15 20:30:51 2021
rw-r--r--  1 patrick    1 KiB  Tue Jun 15 20:30:51 2021
rw-r--r--  1 patrick    2 KiB  Tue Jun 15 20:30:51 2021
rw-r--r--  1 patrick    2 KiB  Tue Jun 15 20:30:51 2021
rw-r--r--  1 patrick    3 KiB  Tue Jun 15 20:30:51 2021
rw-r--r--  1 patrick    7 KiB  Tue Jun 15 20:32:16 2021
rw-r--r--  1 patrick     47 B   Tue Jun 15 20:30:51 2021
rw-r--r--  1 patrick   224 B   Tue Jun 15 20:30:51 2021
rw-r--r--  1 patrick   352 B   Tue Jun 15 20:30:51 2021
```

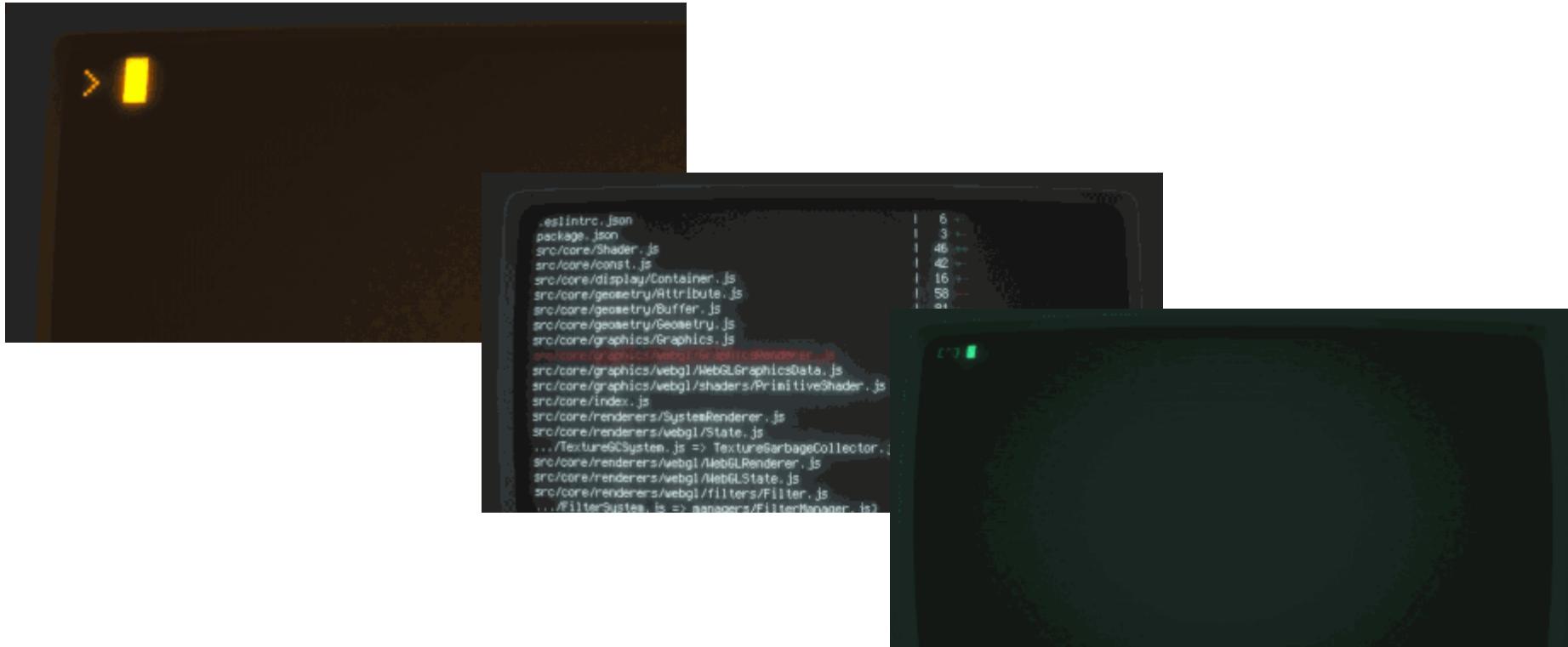
A sidebar on the right lists files with their status checked off:

- ✓ bin/
- ✓ git/
- ✓ obj/
- ✓ ApplicativeDemo.fsproj
- ✓ Demo1.fs
- ✓ Demo2.fs
- ✓ Demo3.fs
- ✓ .gitignore
- ✓ Program.fs
- ✓ README.md
- ✓ TestHelper.fs

terminal - Retro style



- cool-retro-term: 18k stars <https://github.com/Swordfish90/cool-retro-term>



Popular shells

- bash
- zsh
- fish
- dash (embedded)

bash

- <https://www.gnu.org/software/bash/>
- package manager
 - bash-it: ⚡ 13k stars <https://github.com/Bash-it/bash-it>
 - oh-my-bash: ⚡ 4k stars <https://ohmybash.github.io>

zsh

- <https://www.zsh.org/>
- package manager
 - oh-my-zsh: ⚡ 157k stars <https://ohmyz.sh>

fish: The new kid on the block

- <https://fishshell.com>
- package manager
 - fisher: ⚡ 6k stars <https://github.com/jorgebucaran/fisher>
 - oh-my-fish: ⚡ 9k stars <https://github.com/oh-my-fish/oh-my-fish>

PS1

PS1: alias for "prompt"

- default: `username@machinename:~/some/location \$`
- `"\$PWD` present working directory

Extra, nice-to-have information

- only show relevant parts (hide user/machine name on local machine)
- compact location (`\$PWD`)
- git status
- environment infos (node / .NET / Java / Python / etc version)

PS1: Powerline

started as fancy statusline for `vim` ...

- 13k stars <https://github.com/powerline/powerline>
- good-looking default settings
 - shortens `PWD`
 - adds git status
 - stable & customizable
- available for `zsh`, `bash`, etc
- category: unix-porn

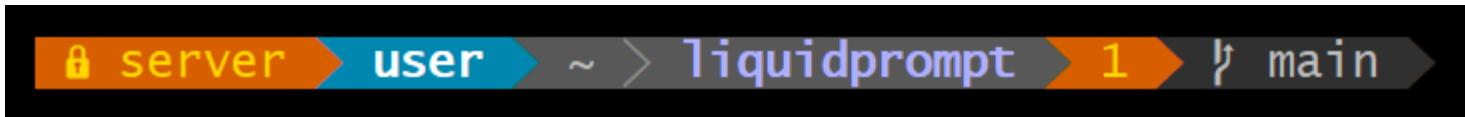
```
~ > code > dotfiles > master $ git branch
* master
~ > code > dotfiles > master $ badcmd
bash: badcmd: command not found
~ > code > dotfiles > master $ cd ~/deep/down/into/the/abyss/of/directories/where/no/one/ever/comes/
~ > deep > ... > no > one > ever > comes > master $ █
```

PS1: liquidprompt

simple prompt

- 4k stars <https://github.com/nojhan/liquidprompt>
- simpler default compared to Powerline
 - shortens ` \$PWD `
 - adds git status
 - can be combined with Powerline
- available for ` zsh `, ` bash `, etc
- category: unix-porn

```
1& [user@server:~/liquidprompt] main ±
```



```
server user ~ > liquidprompt 1 ↵ main
```

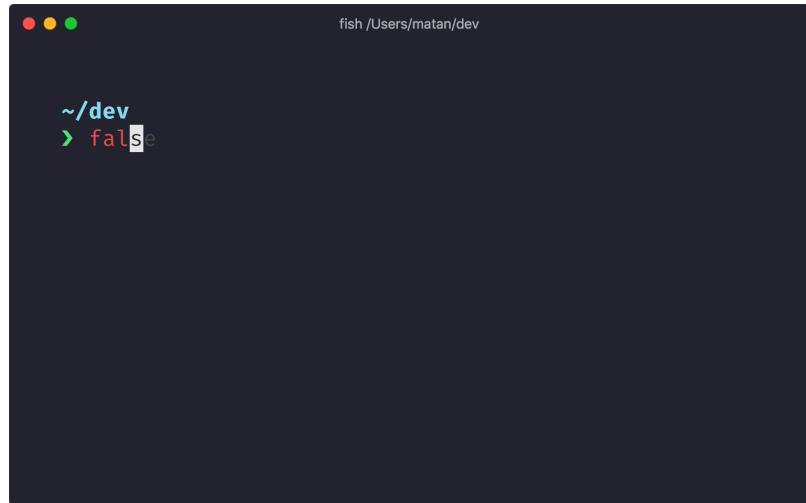
PS1: Starship

the new kid on the block

- 33k stars <https://github.com/starship/starship>
- cross-platform, cross-shell
- stylish
- great defaults for many environments
- easy to configure
- category: unix-porn



The minimal, blazing-fast, and infinitely customizable prompt for any shell!



tmux

terminal-independent shell UI

- 28k stars <https://github.com/tmux/tmux>
- terminal multiplexer
- "tabs" and "split screen" features: terminal independent
- detachable sessions
- plugin system & package manager (of course)
- customizable
- scriptable: f. ex. `tmuxinator`

byobu

`tmux` -wrapper for non-vim users

- (mirrored repo: ~500 stars) <https://www.byobu.org/>
- Keybindings `F1` - `F12`
- Sensible defaults (layout, info line)
- category: productivity



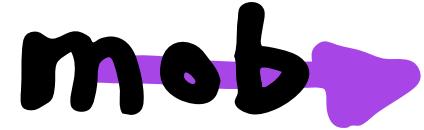
Smooth git handover

- 1k stars <https://mob.sh/>
- remote ensemble or pair programming using screen sharing

```
## first user
mob start 5
mob next

## second user
mob start 5
mob next

## any user, wanting to make a normal commit
mob done
```



ranger

file explorer / manager

- 13k stars <https://ranger.github.io>
- 2 layout options
 - miller columns ("mac" style)
 - multipane (similar to Midnight commander)
- powerful preview mode and program launcher (word, music, ...)
 - with image support for certain terminals (`iTerm2`, `urxvt`, `kitty`) not `gnome-terminal` (!)
- key bindings: see `~/.config/ranger/rc.conf` starting at line ~300...
- category: navigation, file system

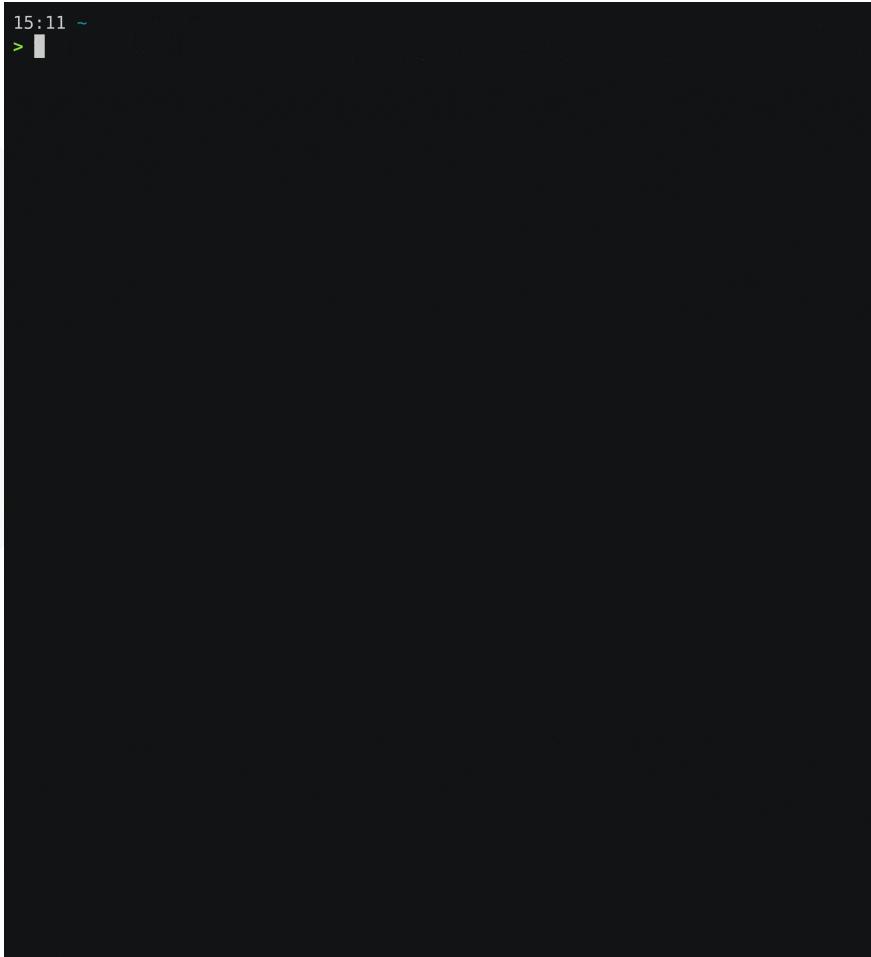
clifm

another terminal file manager

Most terminal file managers out there (if not all) are built using the TUI design principles, much like the superb `Midnight Commander` and `Ranger`. But clifm is built rather having the CLI design principles in mind: do not navigate through a big menu of files, just type it!, exactly as you do in your regular shell, but easier and faster.

For this reason, clifm does not need to be better: it's just different!

- `ranger` alternative
- category: navigation, file system

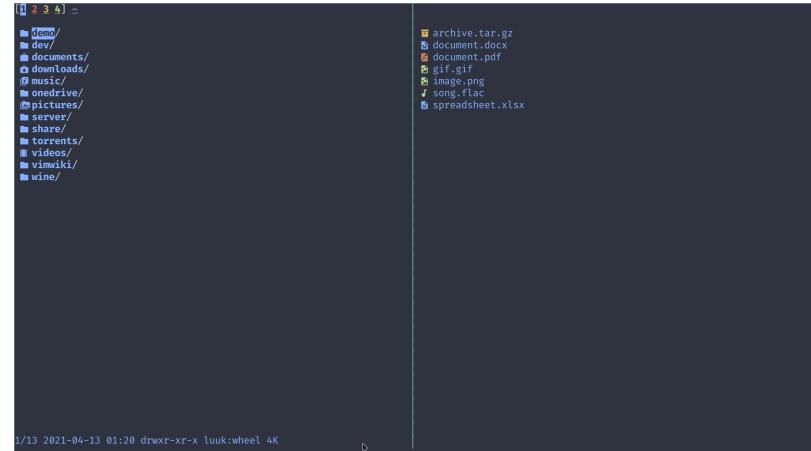


nnn

another terminal file manager

nnn (n^3) is a full-featured terminal file manager. It's tiny, nearly 0-config and incredibly fast.

- `ranger` alternative
- category: navigation, file system



Emacs: wdired-mode

- for Emacs users
- https://www.gnu.org/software/emacs/manual/html_node/emacs/Wdired.html
- `emacs -nw .` emacs in current directory in terminal (`-nw`: non-window mode)
- `M-x wdired-change-to-wdired-mode`
- edit (using all emacs features)
- finish: `C-c C-c`
- exit



man pages can be difficult

- 44k stars <https://tldr.sh/>
- clients implemented in many languages
 - js, ruby, python, perl, haskell, etc.
- shared user-contributed knowledge-base

```
~/cli-talk-demos
> tldr scp

scp

Secure copy.
Copy files between hosts using Secure Copy Protocol over SSH.
More information: https://man.openbsd.org/scp.

- Copy a local file to a remote host:
  scp path/to/local_file remote_host:path/to/remote_file

- Use a specific port when connecting to the remote host:
  scp -P port path/to/local_file remote_host:path/to/remote_file

- Copy a file from a remote host to a local directory:
  scp remote_host:path/to/remote_file path/to/local_directory

- Recursively copy the contents of a directory from a remote host to a local directory:
  scp -r remote_host:path/to/remote_directory path/to/local_directory

- Copy a file between two remote hosts transferring through the local host:
  scp -3 host1:path/to/remote_file host2:path/to/remote_directory

- Use a specific username when connecting to the remote host:
  scp path/to/local_file remote_username@remote_host:path/to/remote_directory

- Use a specific ssh private key for authentication with the remote host:
  scp -i ~/.ssh/private_key local_file remote_host:/path/remote_file
```

McFly

an upgraded `Ctrl R` where history results make sense for what you're working on right now

- 5k stars <https://github.com/cantino/mcfly>
- category: history search

McFly replaces your default `Ctrl R` shell history search with an intelligent search engine that takes into account your working directory and the context of recently executed commands. McFly's suggestions are prioritized in real time with a small neural network.

bat



`cat` & `less` with syntax highlighting

- 40k stars <https://github.com/sharkdp/bat>
- hint: can be used as preview by `ranger` ...
- category: file preview

ripgrep



very fast `grep` replacement

- 37k stars <https://github.com/BurntSushi/ripgrep>
- `ripgrep` recursively searches directories for a regex pattern
- sensible defaults: respect ` `.gitignore` , ignores hidden files & folders
- command: `rg`
- category: search
- use `rg --hidden -g '!.git' "your search"` to search all hidden folder except ` `.git`
 - create an alias (maybe `rgh`?)...

ripgrep-all

ripgrep, but also search in PDFs, E-Books, Office documents, zip, tar.gz, sqlite (!), etc

- 5k stars <https://github.com/phiresky/ripgrep-all>
- command: `rga`
- faster than `pdfgrep` (see website for a benchmark)
- category: search
- Demo: search in Manning books folder



interactive fuzzy search

- 51k stars <https://github.com/junegunn/fzf>
- pipe any line based input to fzf: Example `find * -type f | fzf`
- good integration with other tools
- `Alt+c`: quick `cd` navigation
- nice helper methods for
 - files & directories `cd **<TAB>`
 - kill `kill -9 <TAB>`
 - host names `ssh **<TAB>`
 - environment variables & aliases `unset **<TAB>`, `export **<TAB>`, `unalias **<TAB>`
- category: search

fd



simple alternative to `find`

- 27k stars <https://github.com/sharkdp/fd>
- "The command name is 50% shorter than `find`"
- Convenient syntax `fd PATTERN` (instead of `find -iname '*PATTERN*'`)
- Sensible defaults: `~.gitignore`, ignore hidden files/folders
- fast
- category: search

jq & Co

jq

- lightweight and flexible command-line JSON processor
- 25k stars <https://github.com/jqlang/jq>

jqp

- TUI for `jq`
- 1.8k stars <https://github.com/noahgorstein/jqp>

miller

- similar to `jq`, but also for CSV, TSV, JSON, XML, etc.
- 7k stars <https://github.com/johnkerl/miller>

fq

- `jq`, but for binary data
- 8k stars <https://github.com/wader/fq>

hyperfine

benchmarking tool

- 15k stars

<https://github.com/sharkdp/hyperfine>

```
# comparing `fd` with `find`
hyperfine --warmup 3 \
    'fd -e jpg -uu' \
    'find -iname "*.jpg"'
```

- category: benchmarking

progress

monitor any kind of "copy"

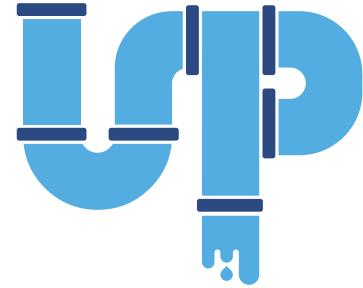
- 6k stars <https://github.com/Xfennec/progress>
- attach to any kind of copy, even after the fact (!)
- category: monitoring

```
No command currently running: cp, mv, dd, tar, cat, rsync, grep, fgrep, egrep, cut, sort, md5sum,  
sha1sum, sha224sum, sha256sum, sha384sum, sha512sum, adb, gzip, gunzip, bzip2, bunzip2, xz,  
unxz, lzma, unlzma, 7z, 7za, zcat, bzcat, lzcat, split, gpg, or wrong permissions.
```

Ultimate Plumber (up)

interactive REPL for shell piping

- 8k stars <https://github.com/akavel/up>
- interactive piping
- instant live preview
- category: search, file manipulation, interactive





Rainbows and unicorns

- ─ 5k stars <https://github.com/busyloop/lolcat>
- ─ category: fun, unix porn

```
~/cli-talk-demos
> lc | lolcat
rwxr-xr-x  1  patrick   182 B    Thu Jun 17 07:24:41 2021 ➔ search-project/
rwxr-xr-x  1  patrick   872 B    Wed Jun 16 01:30:02 2021 ➔ search-project-pdf/
rwxr-xr-x  1  patrick   196 B    Tue Jun 15 20:32:18 2021 ➔ some-project/
rw-r--r--  1  patrick   379 KiB   Tue Jun 15 20:39:21 2021 📸 geek_and_poke_stable_data_model.png
rw-r--r--  1  patrick    23 B    Tue Jun 15 22:01:28 2021 📄 live-notes.md
rw-r--r--  1  patrick   149 B    Tue Jun 15 16:40:27 2021 📄 notes.md
rw-r--r--  1  patrick    2 GiB   Wed Jun 16 01:28:31 2021 📥 ubuntu-20.04.2.0-desktop-amd64.iso

~/cli-talk-demos
> lc | lolcat
rwxr-xr-x  1  patrick   182 B    Thu Jun 17 07:24:41 2021 ➔ search-project/
rwxr-xr-x  1  patrick   872 B    Wed Jun 16 01:30:02 2021 ➔ search-project-pdf/
rwxr-xr-x  1  patrick   196 B    Tue Jun 15 20:32:18 2021 ➔ some-project/
rw-r--r--  1  patrick   379 KiB   Tue Jun 15 20:39:21 2021 📸 geek_and_poke_stable_data_model.png
rw-r--r--  1  patrick    23 B    Tue Jun 15 22:01:28 2021 📄 live-notes.md
rw-r--r--  1  patrick   149 B    Tue Jun 15 16:40:27 2021 📄 notes.md
rw-r--r--  1  patrick    2 GiB   Wed Jun 16 01:28:31 2021 📥 ubuntu-20.04.2.0-desktop-amd64.iso
```

no-more-secrets



when the tv team comes in your office

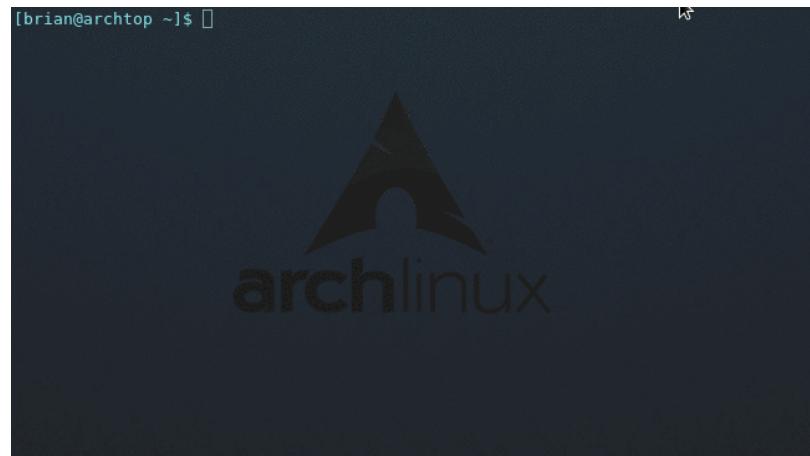
- 5k stars <https://github.com/bartobri/no-more-secrets>
- pipe something to `nms` or just run `sneakers`
- category: fun, unix porn



```
[brian@archtop ~]$
```

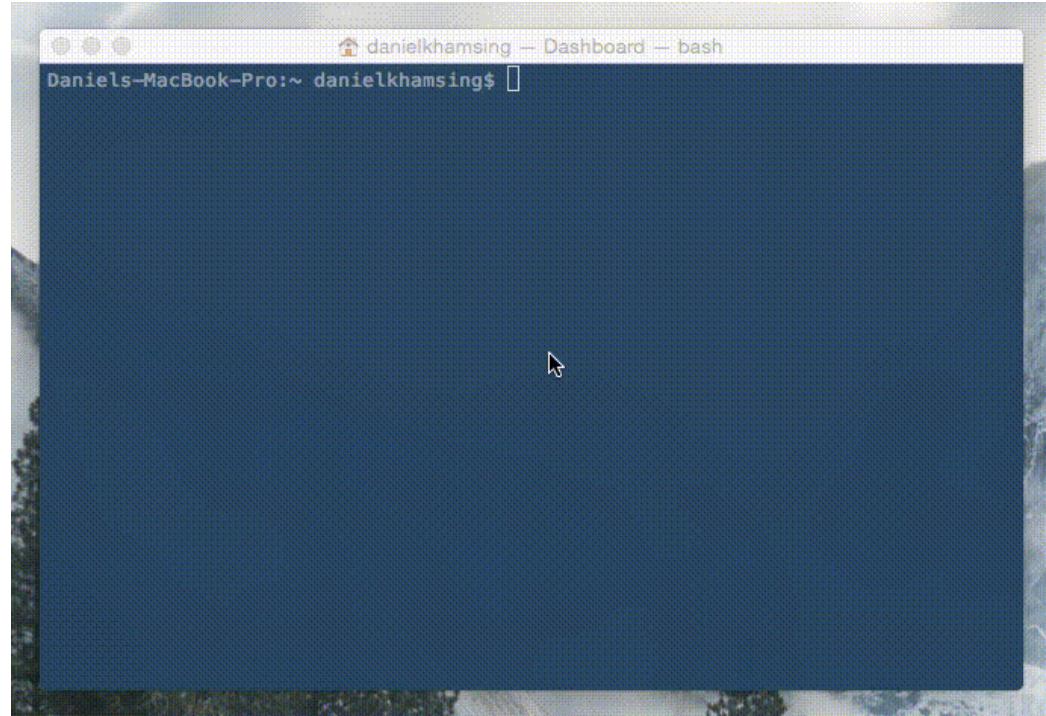


```
[brian@archtop ~]$
```



sl 🚂

- 3k stars <https://github.com/mtoyoda/sl>
- typo `sl` (instead of `ls`) -> show steam locomotive
- can we pipe it to `lolcat`? of course
- category: fun, unix porn



gh

GitHub CLI

- 32k stars <https://github.com/cli/cli>
- Example: push current git folder to new private github repo:
 - `gh repo create --source . --push --private`
- create PRs
- view issues

thefuck



fix common typos / mistakes

- 77k stars <https://github.com/nvbn/thefuck>
- example: pushing a newly created git branch
- category: productivity

A screenshot of a terminal window titled "nvbn@nvbn-desktop: ~/exp/thefuck 76x18". The window shows the command "thefuck git:(master) X" entered. The terminal displays a large amount of text, which is mostly illegible due to the high contrast between the white text and the dark background. The text appears to be a log of command history or a list of files and their details.

ls on steroids

`ls` problem: sort by name and time and size at the same time...

Use colors!

- `colorls` ("the original" in ruby: <https://github.com/athityakumar/colorls>)
- `lsd` (in rust: <https://github.com/Peltoche/lspd>)
- `exa` (in rust: <https://github.com/ogham/exa>)

Required: font providing all symbols

- Example: NerdFonts <https://github.com/ryanoasis/nerd-fonts>

colorls



- 4k stars <https://github.com/athityakumar/colorls>
- category: unix porn

```
> ls
rwxr-xr-x 1 patrick 22 B   Sat May 22 23:23:43 2021
rwxr-xr-x 1 patrick 114 B  Mon May 24 21:34:56 2021
rwxr-xr-x 1 patrick 5 KiB Sat May 22 23:24:07 2021
rwxr-xr-x 1 patrick 44 B   Mon May 24 21:12:56 2021
rwxr-xr-x 1 patrick 64 B   Mon May 24 22:51:56 2021
rwxr-xr-x 1 patrick 52 B   Sat May 22 23:26:40 2021
rwr--r-- 1 patrick 62 B   Sat May 22 23:23:43 2021
rwxr-xr-x 1 patrick 163 B  Sat May 22 23:23:43 2021
rwr--r-- 1 patrick 33 B   Sat May 22 23:23:43 2021
rwr--r-- 1 patrick 276 B  Sat May 22 23:24:05 2021
rwr--r-- 1 patrick 200 KiB Sat May 22 23:24:05 2021
rwr--r-- 1 patrick 351 B  Sun May 23 01:52:10 2021
rwr--r-- 1 patrick 16 KiB Tue May 25 04:39:47 2021
rwr--r-- 1 patrick 7 KiB  Sat May 22 23:27:11 2021
rwr--r-- 1 patrick 17 KiB Sat May 22 23:56:32 2021
rwr--r-- 1 patrick 80 B   Sat May 22 23:23:43 2021
```

- 1: components/
- 2: layouts/
- 3: node_modules/
- 4: public/
- 5: scripts/
- 6: styles/
- 7: .gitignore
- 8: netlify.toml
- 9: .npmrc
- 10: package.json
- 11: package-lock.json
- 12: README.md
- 13: slides.md
- 14: slides.md.original
- 15: slides-patat.md
- 16: vercel.json

lsd

- 9k stars <https://github.com/Peltoche/lspd>
- alternative to `colorls`

ncdu



interactive `df` alternative

- <https://dev.yorhel.nl/ncdu>

boxes

- <https://boxes.thomasjensen.com/docs/>
- ascii art boxes
- show all templates: `boxes -l`
- category: unix porn

```
vivek@wks01:~$ echo "This is a test" | boxes
*****
/* This is a test */
*****
vivek@wks01:~$ echo -e "\n\tVivek Gite\n\tvivek@nixcraft
it.i.biz" | boxes -d dog
          _,-,-=---,-_
         / \ . " . . "
        / \ \o\ : : / \ \
       \ \ : = ~ \ ~ = : /
        \   ( )   /
         . - " - . \   / . - " .
        . - { } - - | / , - - \ | - { } - - .
       ) ( _ ) _ ) \_ / ^ - - - \_ / ( _ ( _ ) ( )
      ( ) Vivek Gite ( )
      ( vivek@nixcraft.com ) )
      ( www.cyberciti.biz ) '
-----'
```

chatGPT-shell-cli

2023 - no presentation without the current hype: ChatGPT

- 414 stars <https://github.com/0xacx/chatGPT-shell-cli>
- Chat-GPT client without any dependencies
- like most clients: requires API-Key
- command: `chatgpt`

```
> chatgpt
Welcome to chatgpt. You can quit with 'exit' or 'q'.

Enter a prompt:
Wie durchsucht man rekursiv alle Markdown Dateien nach dem Wort Magdeburg?

chatgpt Eine Möglichkeit wäre, ein Kommandozeilen-Tool wie "grep" zu verwenden und den Befehl "grep -r 'Magdeburg' *.md"
auszuführen. Dies würde alle Dateien mit der Erweiterung ".md" im aktuellen Verzeichnis und in allen Unterverzeichnissen rekursiv
durchsuchen und nach dem Wort "Magdeburg" suchen.

Enter a prompt:
q
```

monitoring

Everything *top

- htop
- apachetop
- ngxtop
- mtp
- pg_top
- powertop
- iotop
- iftop
- nethogs

lazy*

Everything lazy*

- lazydocker
- lazygit

Status				Config			
lazydocker				Name: <none>			
Services				ID: sha256:a28c7b34cac8c23430c15a6c1a6738e998859057848457cf05			
running api 0.01%				Tags: <none>:<none>			
running mysql 0.13%				Size: 144.02MB			
running quote-fetcher 0.00%				Created: Sat, 29 Jun 2019 15:30:43 AEST			
running redis4.0 0.31%							
Standalone Containers							
exited (1) migrate 0.00%							
running guard 0.00%							
running rails-console 0.00%							
Images				ID	TAG	SIZE	COMMAND
<none> <none> 1				a28c7b34ca		679.20kiB	COPY file:1dc4cce0e59430462e9277b
<none> <none> 1				fa4b5d3656		2.51kiB	COPY file:023433ee488fb0be495da22
bumper latest 9				39923e2d34		232.00B	COPY file:21bfa394d874f9add12dd13
<none> <none> 5				62b1340036		0B	WORKDIR /app
				b4016cf6d7		0B	ENV NODE_ENV=development
				ce36200b46		0B	ARG FURY_TOKEN
				914bfdbef6	node:10-slim	0B	CMD ["node"]
<missing>						4.83MiB	/bin/sh -c set -ex && for key i
<missing>						0B	ENV YARN_VERSION=1.13.0
<missing>						78.81MiB	/bin/sh -c buildDeps='xz-utils'
<missing>						0B	ENV NODE_VERSION=10.15.3
<missing>						325.54kiB	/bin/sh -c groupadd --gid 1000 no
<missing>						0B	CMD ["bash"]
<missing>						52.72MiB	ADD file:4fc310c0cb879c876c5c0f57
Volumes							
local 68473898e49e0e4d2c5998f68c79							
local 90d4357f8a93810ee8f2a59671e7							
local b9a4a32a2d4d6366f9a9434aff8a							
local bc80a55695b8d780db6fbe54f31a							

PgUp/PgDn: scroll, esc/q: close, x: menu, ← → ↑ ↓: navigate

Donate unversioned

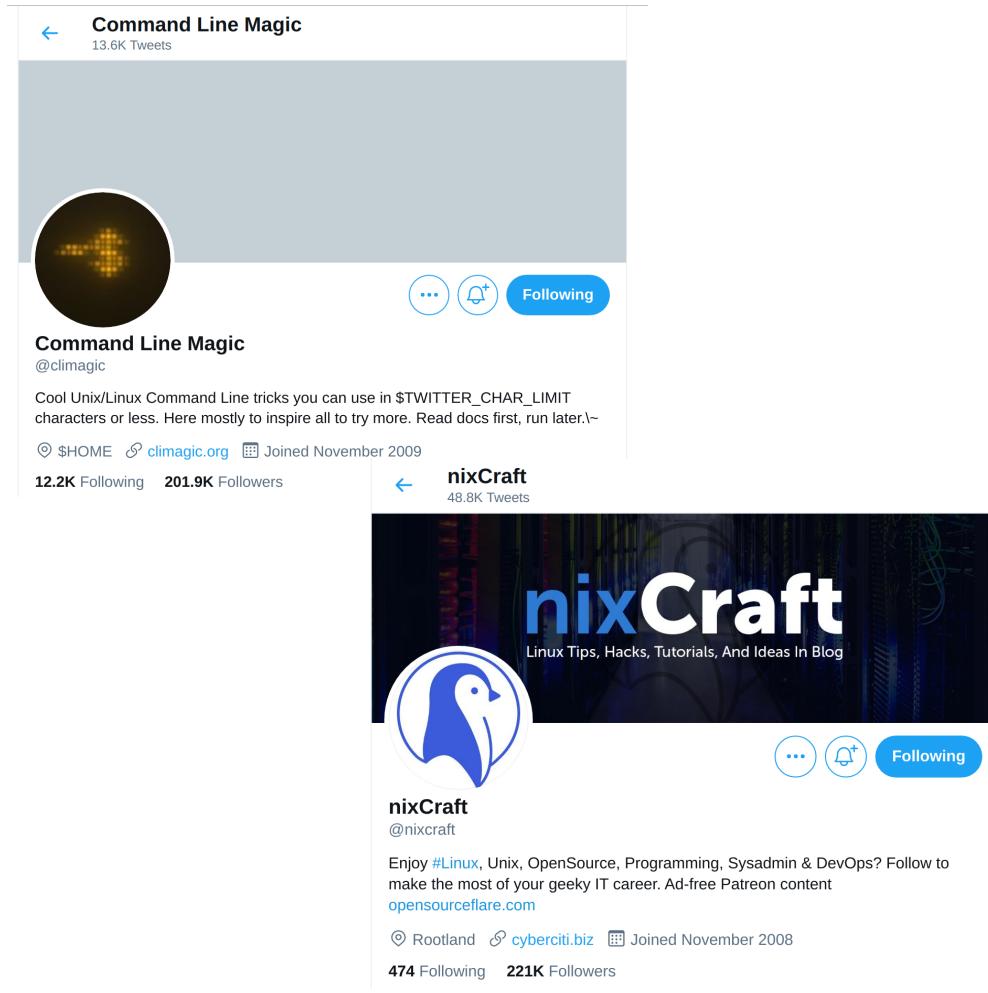
Why didn't I show this presentation in a shell?

I've done it 😇

- 1.9k stars <https://github.com/jaspervdj/patat>
 - Haskell-based
 - plain CLI
 - no image support
 - no fallback

Resources

-  <https://twitter.com/climagic>
-  <https://twitter.com/nixcraft>
-  [r/commandline](https://www.reddit.com/r/commandline)
-  [r/unixporn](https://www.reddit.com/r/unixporn)
- search for "awesome-cli"



The image displays two Twitter profiles side-by-side.

Top Profile: Command Line Magic (@climagic)

- Profile picture: A dark circular icon featuring a glowing yellow pixelated arrow pointing right.
- Follow button: Shows "Following".
- Username: Command Line Magic
- Handle: @climagic
- Description: Cool Unix/Linux Command Line tricks you can use in \$TWITTER_CHAR_LIMIT characters or less. Here mostly to inspire all to try more. Read docs first, run later.:-)
- Statistics: 13.6K Tweets, 12.2K Following, 201.9K Followers

Bottom Profile: nixCraft (@nixcraft)

- Profile picture: A blue circular icon featuring a white ghost-like logo.
- Follow button: Shows "Following".
- Username: nixCraft
- Handle: @nixcraft
- Description: Linux Tips, Hacks, Tutorials, And Ideas In Blog
- Statistics: 48.8K Tweets, 474 Following, 221K Followers

I forgot your favorite tool?

- git-fuzzy <https://github.com/bigH/git-fuzzy>
- forgit <https://github.com/wfxr/forgit>
- mosh (robust replacement for ssh) <https://mosh.org/>
- fish_config (web-based configuration tool for fish shell)
https://fishshell.com/docs/current/commands.html#fish_config
- xclip (cli to X clipboard) 403 stars
<https://github.com/astrand/xclip>
- neofetch (fancy system info in the shell) 7.7k stars
<https://github.com/dylanaraps/neofetch>
- expect <https://likegeeks.com/expect-command/>
- httpie (cli http client) 45k stars <https://httpie.org/>
- http-prompt (cli http client) 7.6k stars <http://http-prompt.com/>
- pywal (color schemes for terminal) 3.4k stars
<https://github.com/dylanaraps/pywal>
- apt-iselect (interactive ncurses package search for debian)
<https://www.rot13.org/~dpavlin/apt-iselect.html>
- gcalcli (google calender in the shell) 2k stars
<https://github.com/insanum/gcalcli>
- pastebinit (cli tool to send data to pastebin) 17 stars
<https://github.com/skorokithakis/pastebinit>
- MapSCII (ascii google maps in the terminal)
<https://github.com/rastapasta/mapscki>
- alwaysontop (always move prompt to top of screen) 160 stars
<https://github.com/swirepe/alwaysontop>
- wttr.in (ascii weather report) <https://github.com/chubin/wttr.in>

Thank You!

- [!\[\]\(70d8915cebbf69db9a21e732a2a917ad_img.jpg\) patrick.drechsler@mathema.de](mailto:patrick.drechsler@mathema.de)
- [!\[\]\(327f114117e742a9efb2d45a160d1a0a_img.jpg\) https://github.com/drapтик](https://github.com/drapтик)
- Blog: [!\[\]\(8754ca252c10cbcc491ecbbe642c9c53_img.jpg\) https://draptik.github.io](https://draptik.github.io)
- [!\[\]\(78bc5794fb931bd75204c41603a4b6df_img.jpg\) @drechsler](https://twitter.com/drechsler)
- [!\[\]\(eeaab2babde06940771ab20076a4f411_img.jpg\) @drechsler@floss.social](https://@drechsler@floss.social)
- [!\[\]\(2c132c64ca45481813a3e8f2ecd21287_img.jpg\) https://www.linkedin.com/in/patrick-drechsler-985a2911/](https://www.linkedin.com/in/patrick-drechsler-985a2911/)

Slides 

- QR Code or
- [!\[\]\(4a9ecf7173af01b5af585194bcb66cd1_img.jpg\) https://draptik.github.io/2023-06-cloudland-modern-linux-cli-tools](https://draptik.github.io/2023-06-cloudland-modern-linux-cli-tools)

