Liquid Prompt

Yes, we can
drastically rethink
the design of
a shell prompt

–

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FOSDEM
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LP 2

Prompts

Shell Prompts

- Everyday's Command Line Interface
- Defaults (at most) to: [nojhan@fosdem:~]$
- Purpose:
  - Indicate where you are (ex. dir)
  - Warn when problems are coming (ex. space)
  - Follow state of work (ex. git)

LP 4

Where is my mind?

```
NUC-354090% sudo tail -n 10 /var/log/syslog
2024-01-29T21:30:05.921748+01:00 NUC-354090 systemd[3098]: Stopped tracker-miner-fs-3.service - Tracker
file system data miner.
2024-01-29T21:30:05.921939+01:00 NUC-354090 systemd[3098]: tracker-miner-fs-3.service: Consumed 1min 9.6
04s CPU time.
2024-01-29T21:30:05.948296+01:00 NUC-354090 systemd[3098]: Starting tracker-miner-fs-3.service - Tracker
 file system data miner...
2024-01-29T21:30:14.828288+01:00 NUC-354090 tracker-extract[2632843]: Could not connect to filesystem mi
ner endpoint: Timeout was reached
2024-01-29T21:30:14.835177+01:00 NUC-354090 systemd[3098]: tracker-extract-3.service: Main process exite
d, code=exited, status=1/FAILURE
2024-01-29T21:30:14.835446+01:00 NUC-354090 systemd[3098]: tracker-extract-3.service: Failed with result
 'exit-code'.
2024-01-29T21:30:14.835637+01:00 NUC-354090 systemd[3098]: Failed to start tracker-extract-3.service - T
racker metadata extractor.
2024-01-29T21:30:15.171227+01:00 NUC-354090 systemd[3098]: tracker-extract-3.service: Scheduled restart
job, restart counter is at 1487.
2024-01-29T21:30:15.171422+01:00 NUC-354090 systemd[3098]: Stopped tracker-extract-3.service - Tracker m
etadata extractor.
2024-01-29T21:30:15.211839+01:00 NUC-354090 systemd[3098]: Starting tracker-extract-3.service - Tracker
metadata extractor...
NUC-354090% tail -n 10 /var/log/messages
tail: impossible d'ouvrir '/var/log/messages' en lecture: Aucun fichier ou dossier de ce type
NUC-354090% ifconfig
eno1: flags=4099<UP,BROADCAST,MULTICAST>  mtu 1500
        ether 54:b2:03:18:a8:fd  txqueuelen 1000  (Ethernet)
        RX packets 0  bytes 0 (0.0 B)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 0  bytes 0 (0.0 B)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
        device interrupt 16  memory 0xdc200000-dc220000
```

7 Prompts

Feature	Liquidprompt	Starship	Spaceship	Oh-My-Posh	Powerlevel10k	Powerline	Pure
Language	Shell	Rust	Zsh	Go	Zsh	Python	Zsh
License	AGPLv3	ISC	MIT	MIT	MIT	MIT	MIT
Github stars (k)	4.2	28	17.2	7.4	30.4	13.4	11.5

LP 6

Features

Prompt	Essentials	Version control	Environments	Toolsets	Misc	Services
Liquid Prompt	★★★	★★★	★★★	★	★★	_
*ship	★★	★★	★★★	★★★	★	_
PowerLevel10k	★★	★	★★★	★★	★★	★
Oh-My-Posh	★	★★	★	★★	★	★★
Powerline	★	★	★	_	★★	★★★
Pure	★	★	_	_	_	_

https://github.com/liquidprompt/liquidprompt/wiki/Why

LP 7

Design axes

https://github.com/liquidprompt/liquidprompt/wiki/Why

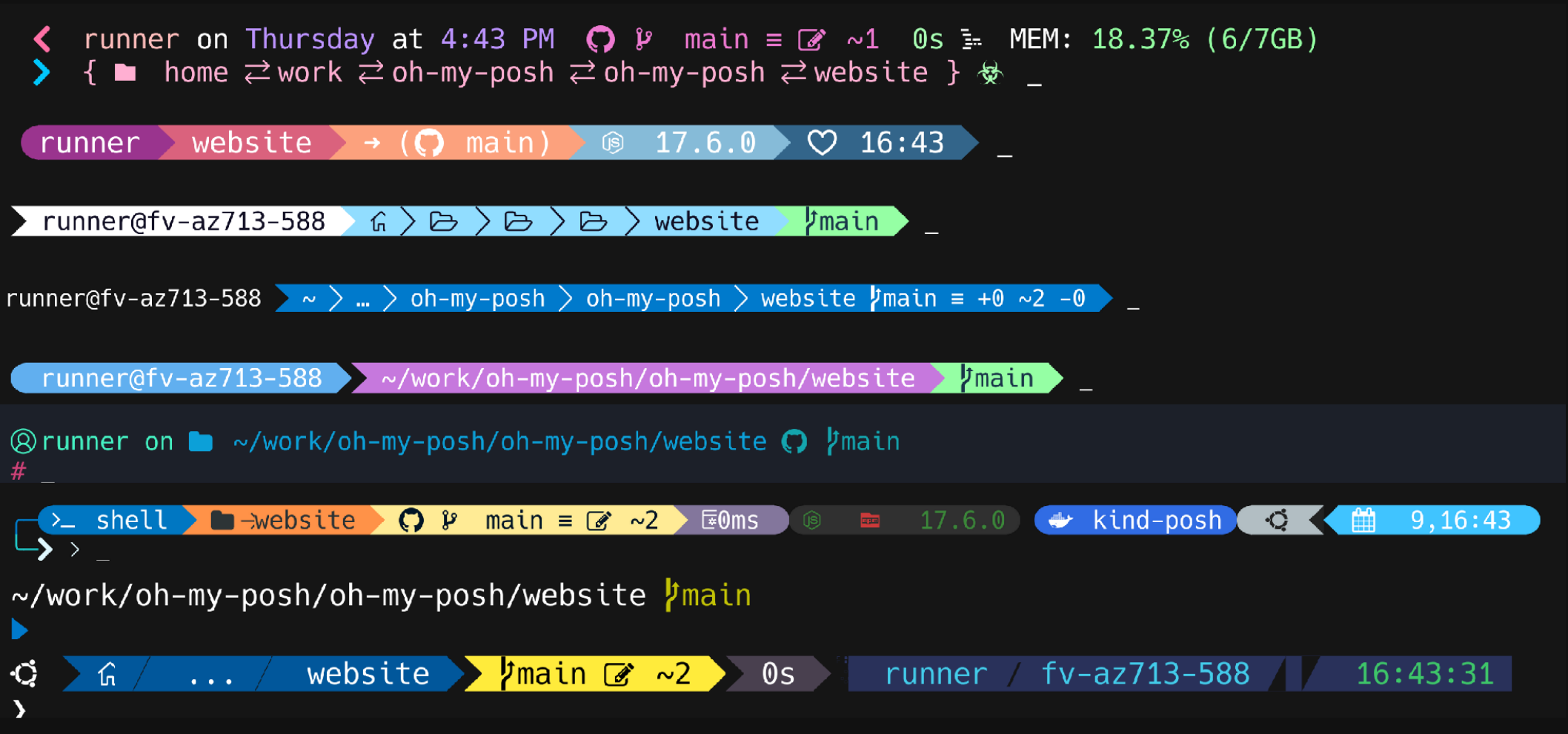
- **focused:** targets states that are actually useful to the user during a work session,
- **seamless:** does not product friction with the user workflow,
- **scoped:** targets states that can change,
- **measured:** embraces the fact that some states change less often than others,
- **accentuated:** makes more visible the feedback for more important state changes,
- **configurable.**

Design

Prompt	Focused	Seamless	Scoped	Measured	Accentuated	Configurable
Liquid Prompt	✹✹✹	★★	★★	✹✹✹	✹✹✹	✹✹✹
PowerLevel10k	★★	✹✹✹	★★	★★	★★	★★
Oh-My-Posh	★★	★★	★★	★★	★	★★
Pure	★★	★★	★★	★★	★	★★
*ship	★	★★	★	★	★	★★
Powerline	★	★★	★	★	★	★

https://github.com/liquidprompt/liquidprompt/wiki/Why

LP 9 Example – Oh-My-Posh



LP 10

Much Information!

SOLID PROMPT

```
2.2.0 vs [2.2.0]
  VCS:[git     ] remt:[          ]
 diff:[+10/-5  ] hdst:[          ]
comit:[+3/-1    ] bkmk:[          ]
stash:[1        ] vers:[          ]
utrak:[1        ] brch:[main      ]
    ⎧load:[42    ]
    ⎪ ram:[31%   ]
snsr⎨batt:[↓24%  ]
    ⎪disk:[/////]
    ⎩temp:[90°   ]
X11:○ su:○ sudo:/ proxy:/ chroot:○
    ⎧suspd:[1    ]
jobs⎨bkgrd:[2    ]
    ⎩dtchd:[3    ]
shlvl:[2  ]
  RSH:●
  mux:○
ptag:[          ]
user:[user      ]
host:[server    ]
pyev:[pyenv
node:[//////////
ruby:[//////////
kube:[//////////
trfm:[//////////
cont:[//////////
awsp:[//////////
scls:[//////////
shel:[bash]
RO:●
rntm:[20s
drstk:[3  ] path:[~/code/liquidprompt/docs/theme
└
```

https://github.com/nojhan/lp-solid

We Can Do Better

- **Important information first**
- **Help visual parsing**
- *Avoid list of segments*
- **Be colorblind-friendly**
- *Avoid psychedelic rainbows*
- **Avoid text overload**
- **Use logical sequences**
- **Semantic thresholds**

Liquid Prompt / DotMatrix

- https://github.com/nojhan/lp-dotmatrix

LP 13

LiquidPrompt / DotMatrix

Short prompt:

X user ~

Medium prompt:

T user server~ / liquidprompt 1&

± main

Long prompt:

T user server ~ / code / liquidprompt / docs / theme 3 24% 1.68 90θ 3d 2& 1z

pyenv

±/1 3 main +10/-5 +/? 20s 125

https://github.com/nojhan/lp-dotmatrix

LP 14 Important information first

- Prioritize based on location on screen
  - more stability, thus easier to spot changes
- 2 colors for important states changes

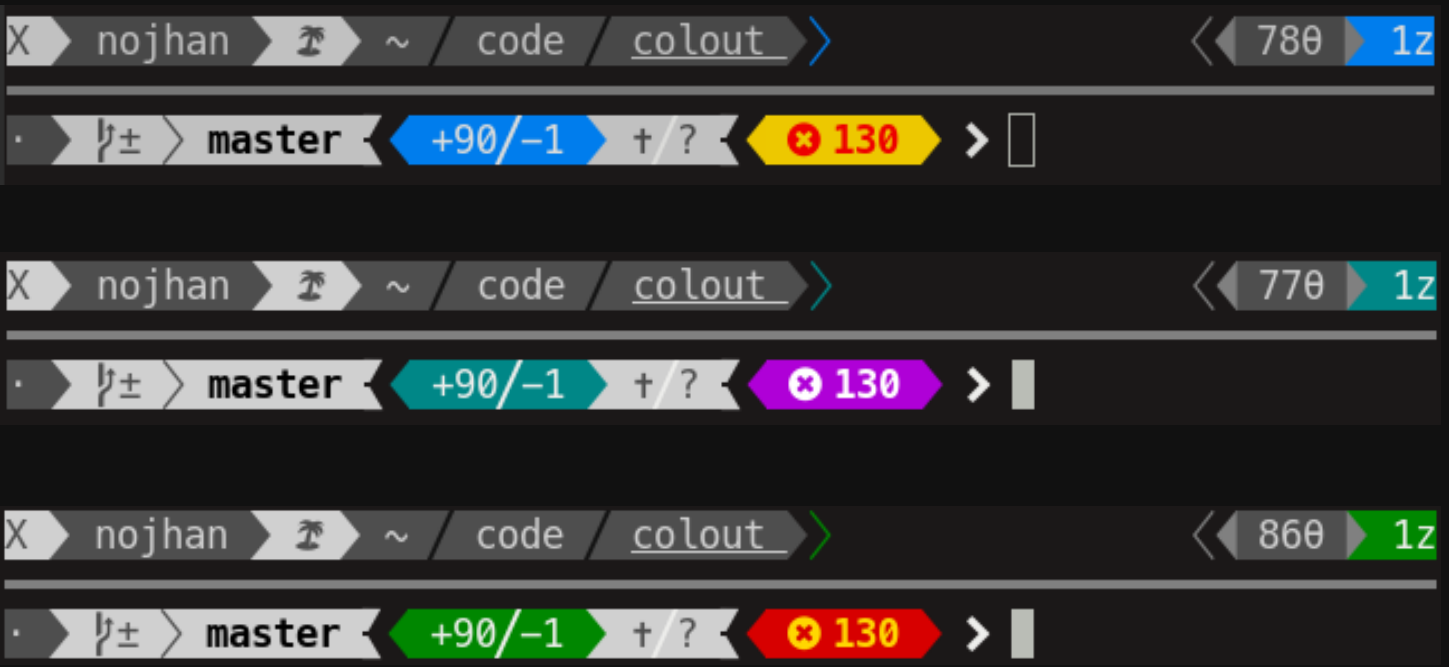
LP 15

Help visual parsing

- Consistent segments
- Section Line

```
X  nojhan  ~                                                                                                  810

· > sudo tail -n 10 /var/log/syslog
[sudo] Mot de passe de nojhan :
2024-01-29T22:09:20.421370+01:00 NUC-354090 systemd[3098]: tracker-extract-3.service: Scheduled restart job, restart counter is at 1565.
2024-01-29T22:09:20.421464+01:00 NUC-354090 systemd[3098]: Stopped tracker-extract-3.service - Tracker metadata extractor.
2024-01-29T22:09:20.451868+01:00 NUC-354090 systemd[3098]: Starting tracker-extract-3.service - Tracker metadata extractor...
2024-01-29T22:09:50.659767+01:00 NUC-354090 tracker-extract[2780283]: Could not connect to filesystem miner endpoint: Timeout was reached
2024-01-29T22:09:50.664984+01:00 NUC-354090 systemd[3098]: tracker-extract-3.service: Main process exited, code=exited, status=1/FAILURE
2024-01-29T22:09:50.665317+01:00 NUC-354090 systemd[3098]: tracker-extract-3.service: Failed with result 'exit-code'.
2024-01-29T22:09:50.665851+01:00 NUC-354090 systemd[3098]: Failed to start tracker-extract-3.service - Tracker metadata extractor.
2024-01-29T22:09:50.921232+01:00 NUC-354090 systemd[3098]: tracker-extract-3.service: Scheduled restart job, restart counter is at 1566.
2024-01-29T22:09:50.921441+01:00 NUC-354090 systemd[3098]: Stopped tracker-extract-3.service - Tracker metadata extractor.
2024-01-29T22:09:50.947912+01:00 NUC-354090 systemd[3098]: Starting tracker-extract-3.service - Tracker metadata extractor...

X  nojhan  ~                                                                                                  830

· > tail -n 10 /var/log/messages
tail: impossible d'ouvrir '/var/log/messages' en lecture: Aucun fichier ou dossier de ce type

X  nojhan  ~                                                                                                  600

· 1 > ifconfig
eno1: flags=4099<UP,BROADCAST,MULTICAST>  mtu 1500
        ether 54:b2:03:18:a8:fd  txqueuelen 1000  (Ethernet)
        RX packets 0  bytes 0 (0.0 B)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 0  bytes 0 (0.0 B)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
        device interrupt 16  memory 0xdc200000-dc220000
```

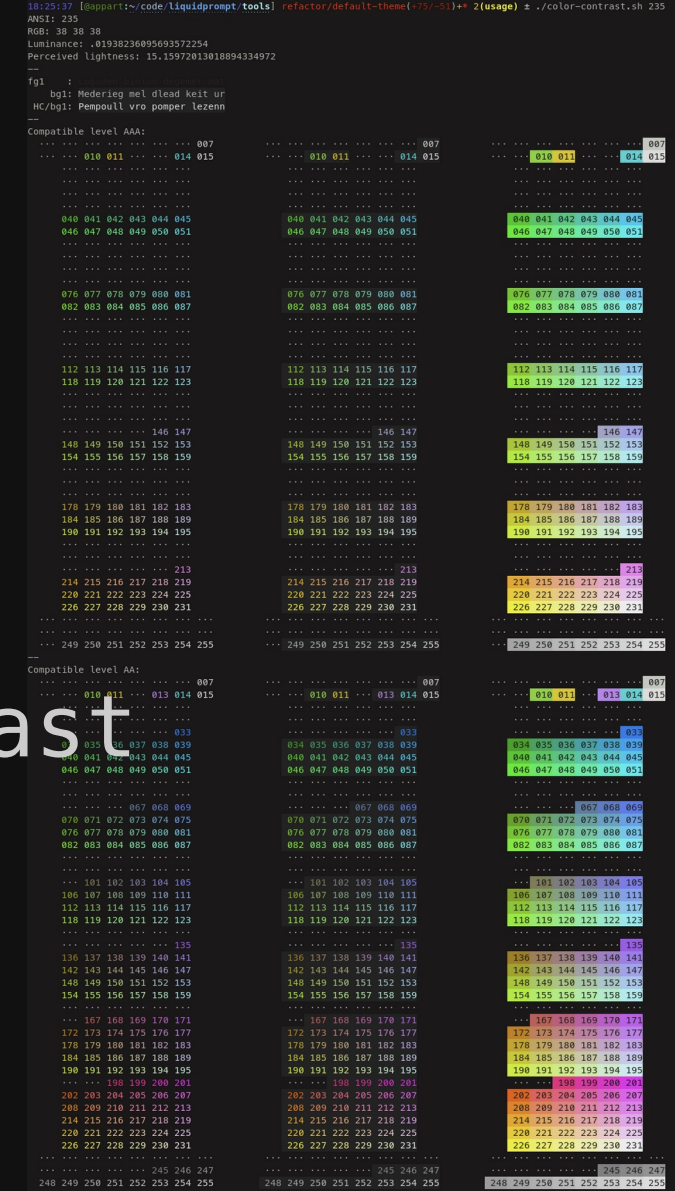
LP 16 colorblind-friendly



LP 17

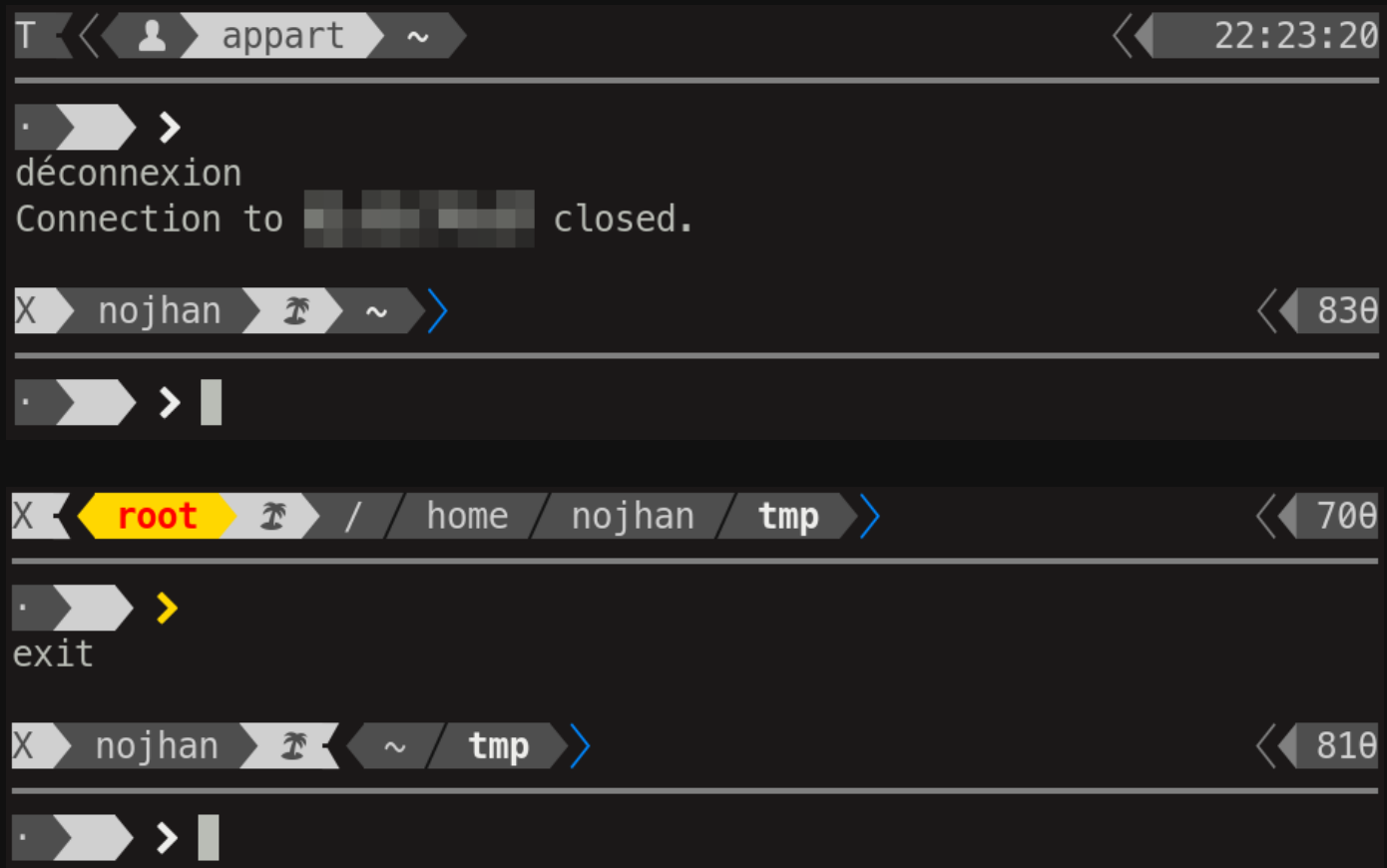
Colors contrast

- ANSI colorspace
  - 256 colors
  - $3b_{red}$ x $3b_{green}$ x $2b_{blue}$
- Tool to test AAA/AA contrast
  - One color over all
  - Pair of colors



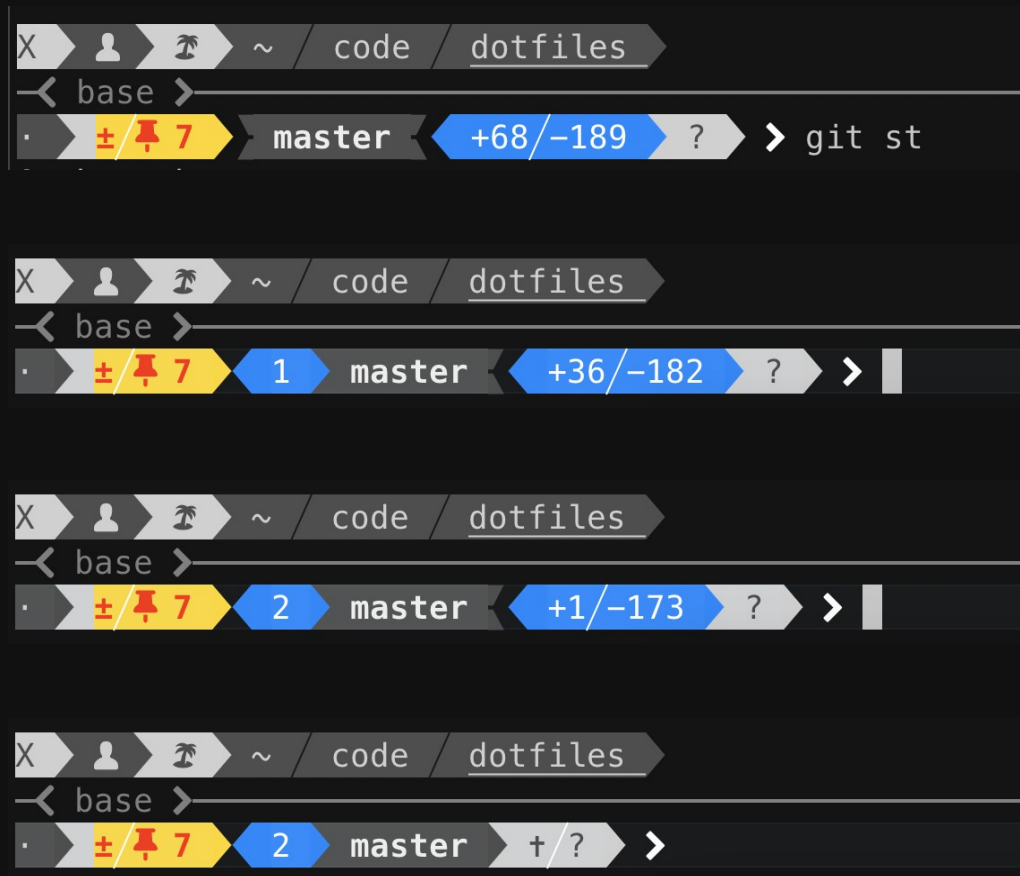
LP 18 Avoid text overload

- Use negative spaces



Use logical sequences

- GIT:
  - from right (local repo)
  - to left (remote repo)



LP 20

Semantic thresholds

- Normal
- Note
- Warning

```
X  nojhan  ~ / code / lp-gitcrux                                  760
·  ±  main  +278/-1  > kak README.md

X  nojhan  ~ / code / lp-gitcrux                                  830
·  ±  main  +345/-1  >
```

```
X  nojhan  ~ / code / lp-gitcrux                                  850
·  ±/±  4  main  +0/-112  > git commit -a
suggestion : en attente de la fermeture du fichier par votre édite
[main 5964131] test
 1 file changed, 112 deletions(-)

X  nojhan  ~ / code / lp-gitcrux                                  870
·  ±/±  5  main  >
```

LP 21

DotMatrix

https://github.com/nojhan/lp-dotmatrix

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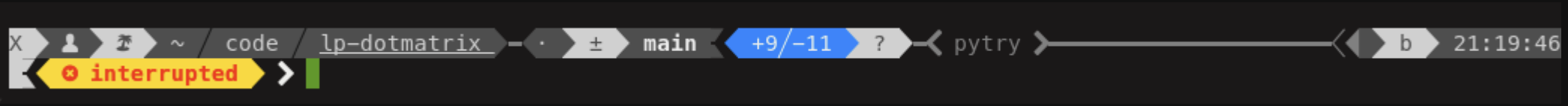
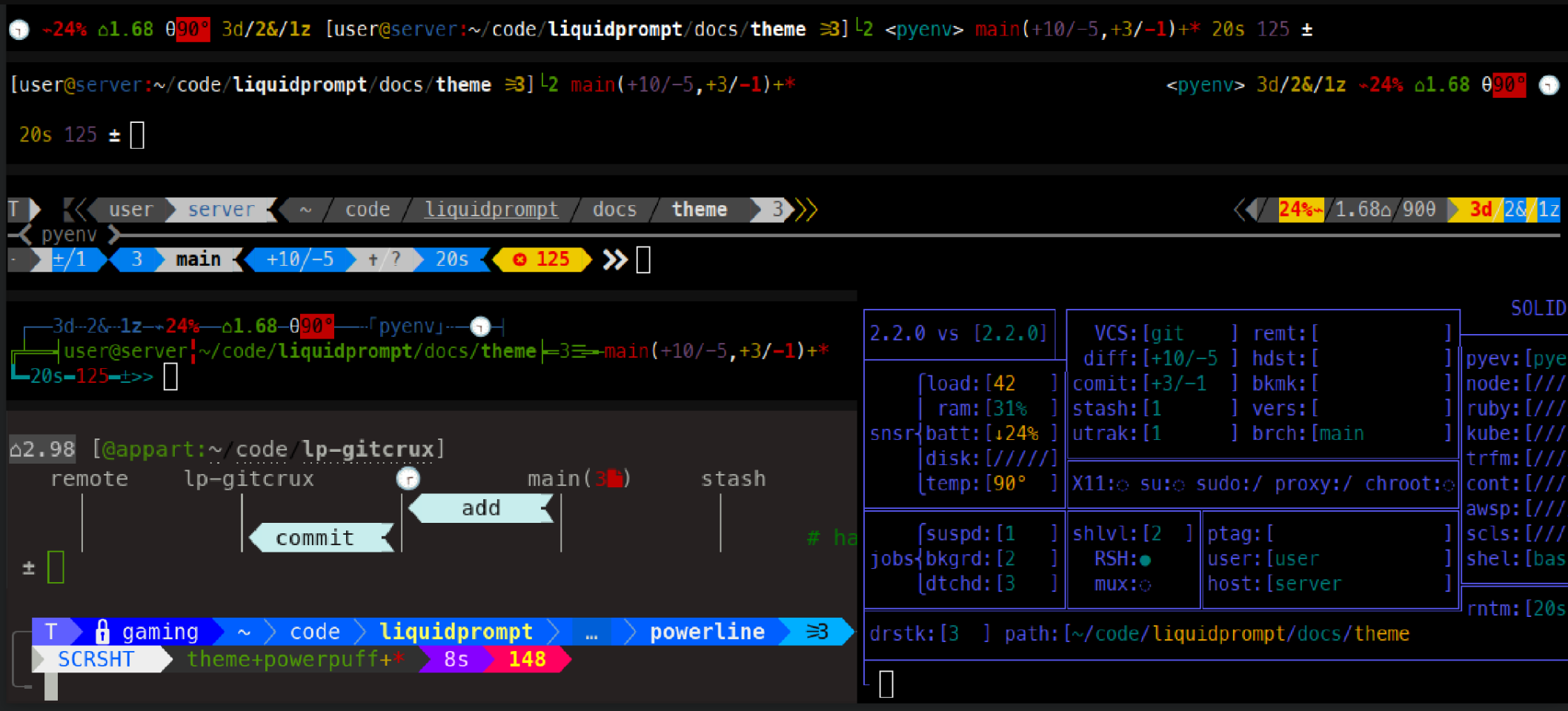
More thoughts about the design of Liquid Prompt:
https://github.com/liquidprompt/liquidprompt/wiki/Why#design

More Git

```
X  ~  code  dotfiles
 base
 ±  7  2  master  +?  > git pull
Auto-merging .bashrc
CONFLICT (content): Merge conflict in .bashrc
Auto-merging kak/kakrc
CONFLICT (content): Merge conflict in kak/kakrc
Automatic merge failed; fix conflicts and then commit the result.

X  ~  code  dotfiles
 base
 ±  7  2  master  +102 -6  +?  MERGING  error  > kak .
bashrc kak/kakrc

X  ~  code  dotfiles
 base
 ±  7  2  master  +55 -11  +?  MERGING  > git add .bashrc
kak/kakrc

X  ~  code  dotfiles
 base
 ±  7  2  master  ±0  +?  MERGING  > git commit
[master 1b07797] Merge branch 'master' of github.com:nojhan/dotfiles

X  ~  code  dotfiles
 base
 ±  3  master  ±0  +?  >

X  ~  code  dotfiles
 base
 ±  master  +?  >
```

DotVector

- One liner



LP 25 Themes — Liquid Prompt