



# Porque usar Go

TDC 2020 BELO HORIZONTE 25/04



**Jefferson Otoni**

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[s3wf.com.br](http://s3wf.com.br)

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@jeffotoni







# Alguns pilares

Legibilidade

Comunidade

Simplicidade

Produtividade

simultaneidade





# – A comunidade e a pandemia <sup>=GO</sup>

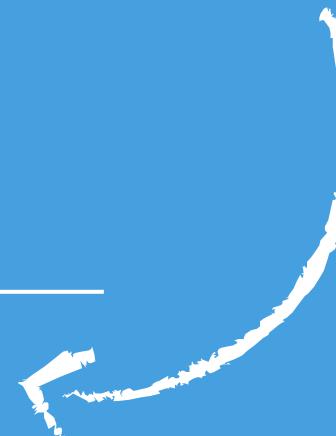
Virologista, epidemiologista, pesquisadores

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<https://blog.golang.org/pandemic>

<https://covid-oss-help.org>

<https://discourse.covid-oss-help.org>





Gophers ▾  
jeffotoni



#general ☆

8,45,318 | % 20 | Need help with Go? You're in the right place! | Co

SEARCHED BY USERS:

Posted in #general · Today at 10:30 AM · View message

Peter Hellberg 10:11 AM

Ah, I missed those when searching on GitHub 😊

Ok, those you can access with [page.go.golang.org](#) for example

Luna Lovegood 10:11 AM

I would like to do similarly for one of my private packages.

yes, have done this.

From my package too I would like to export

Peter Hellberg

Ok, those you can access with [page.go.golang.org](#)

Posted in #general · Today at 10:11 AM · View message

Peter Hellberg 10:12 AM

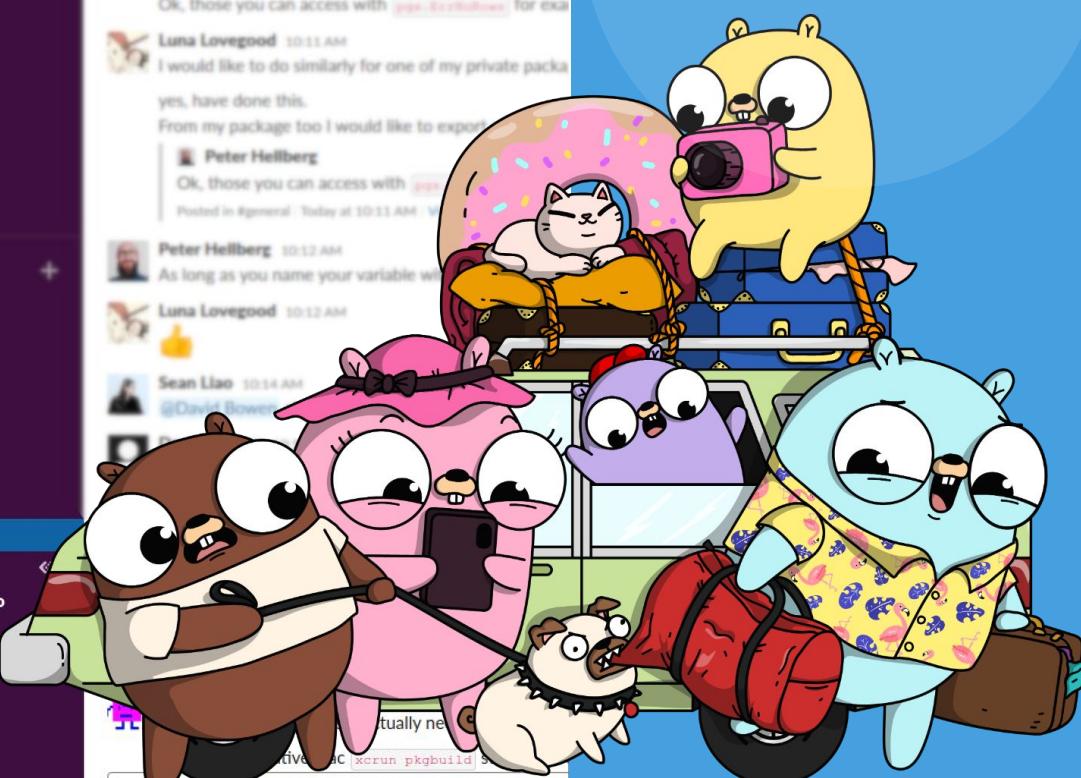
As long as you name your variable with

Luna Lovegood 10:12 AM

thumb up

Sean Liao 10:14 AM

@DavidBoyer



# Comunidade

## Telegram

[https://t.me/go\\_br](https://t.me/go_br)

[https://t.me/go\\_bh](https://t.me/go_bh)

<https://t.me/golangcwb>

## Slack

<https://gophers.slack.com>

(members >~45k)

## GopherCon Brasil 2020

<https://2020.gopherconbr.org>

## Wiki Conferencias

<https://github.com/golang/go/wiki/Conferences>

## Meetup

<https://www.meetup.com/go-belo-horizonte>

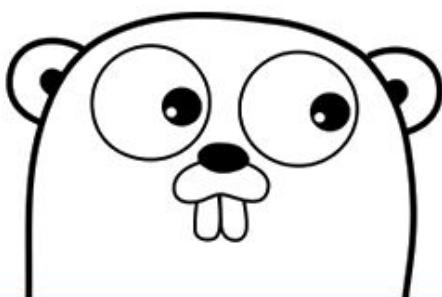
<https://www.meetup.com/pt-BR/golangbr>

## GoWeek | GoUnited

em breve ...



Go is an open source programming language that makes it easy to build **simple, reliable, and efficient** software.



Download Go

Binary distributions available for Linux, macOS, Windows, and more.

<https://golang.org>  
[https://golang.org/doc/effective\\_go.html](https://golang.org/doc/effective_go.html)  
<https://golang.org/ref/spec>

<https://golang.org/doc>  
<https://tour.golang.org/welcome/1>

## Try Go

[Open in Playground](#)

```
// You can edit this code!
// Click here and start typing.
package main

import "fmt"

func main() {
    fmt.Println("Hello, 世界")
}
```

Go > Criado Por

Robert Griesemer



Ken Thompson



Rob Pike



Hello, World!

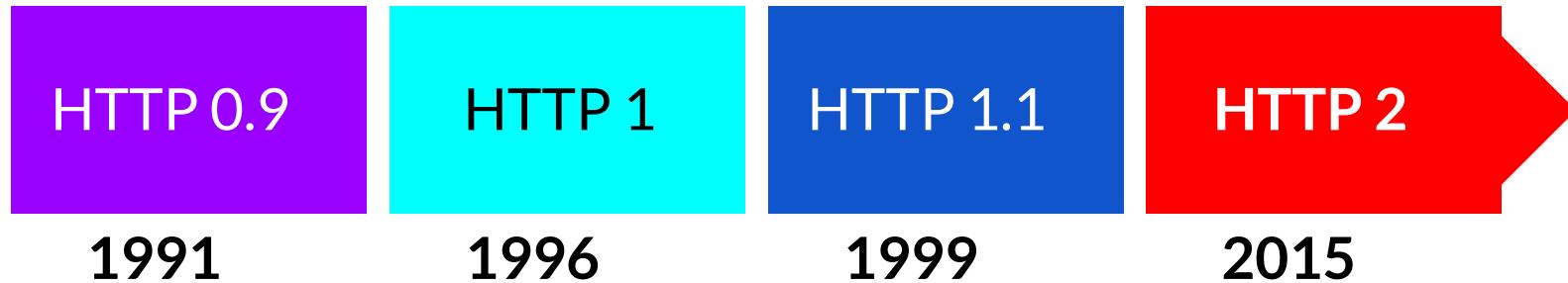
Run

Share

Tour

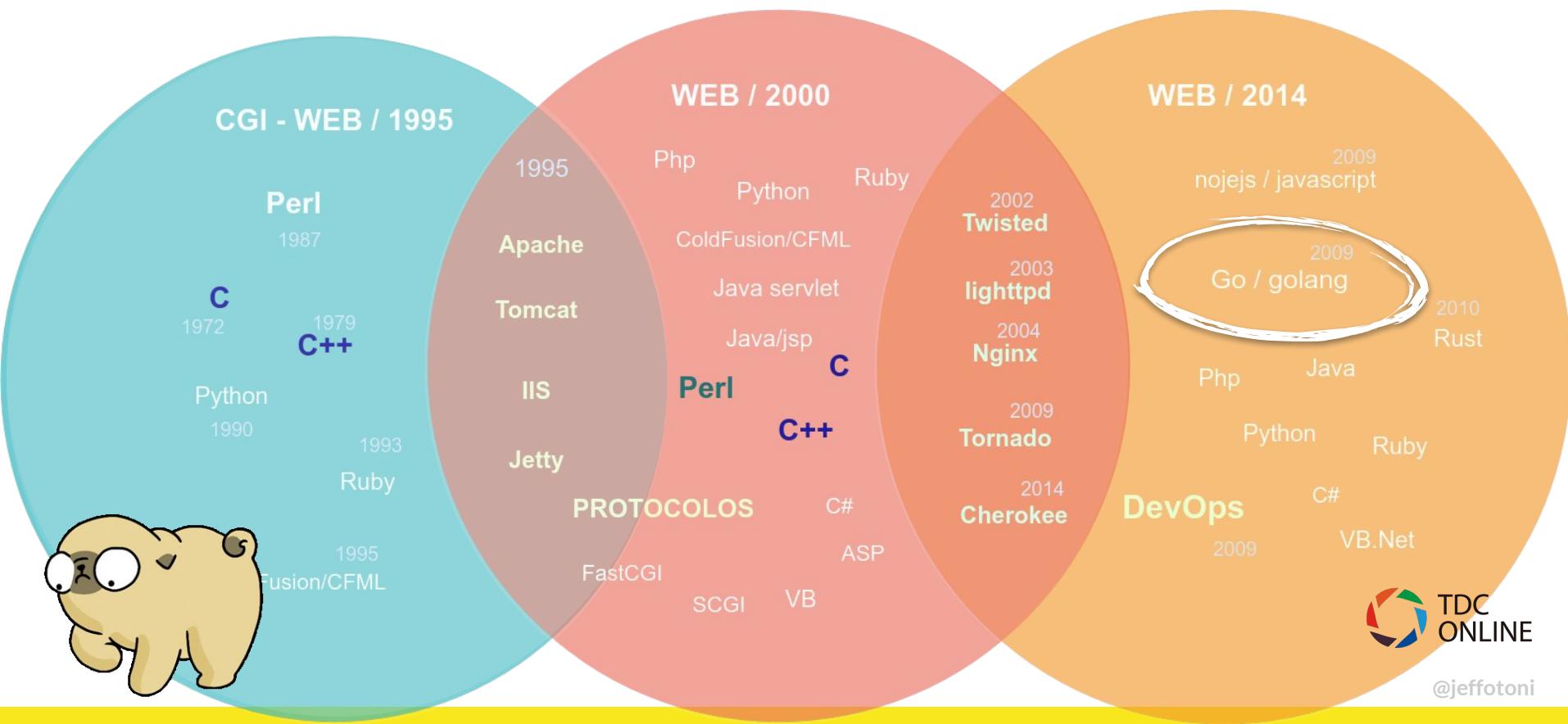


# Evolução do HTTP



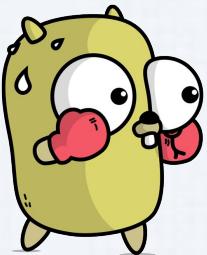
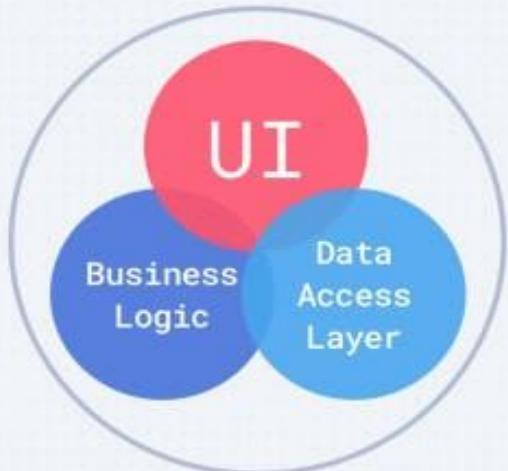


# Entendo o problema

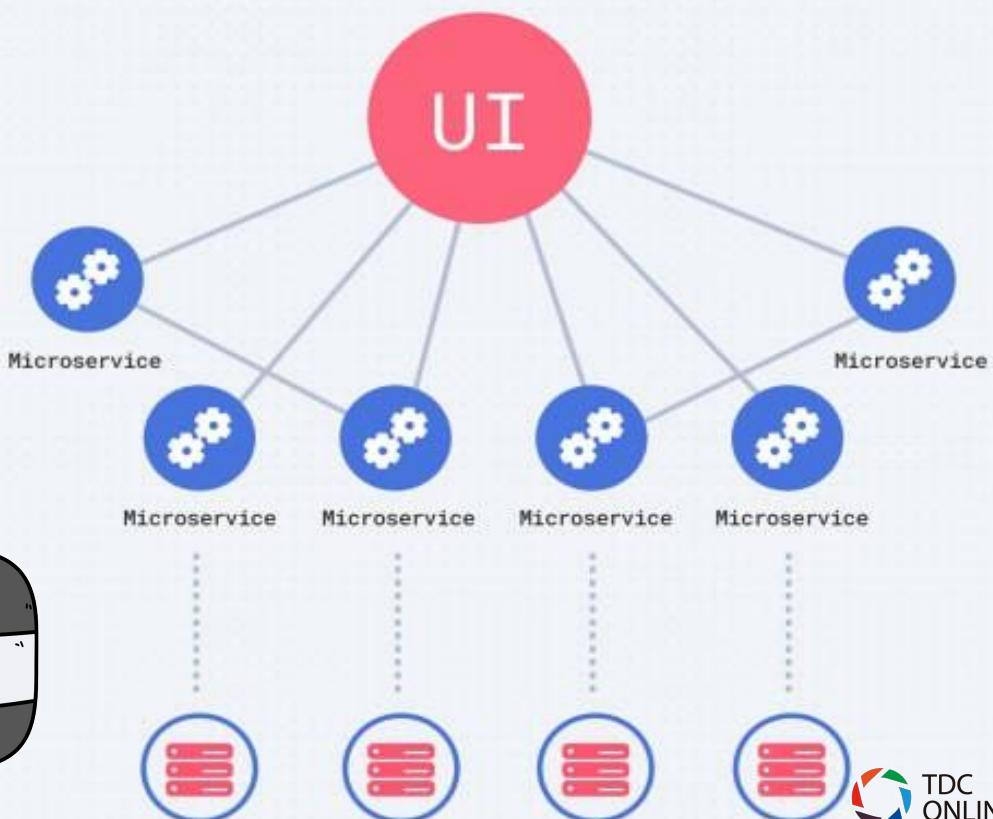




## Monolithic Architecture

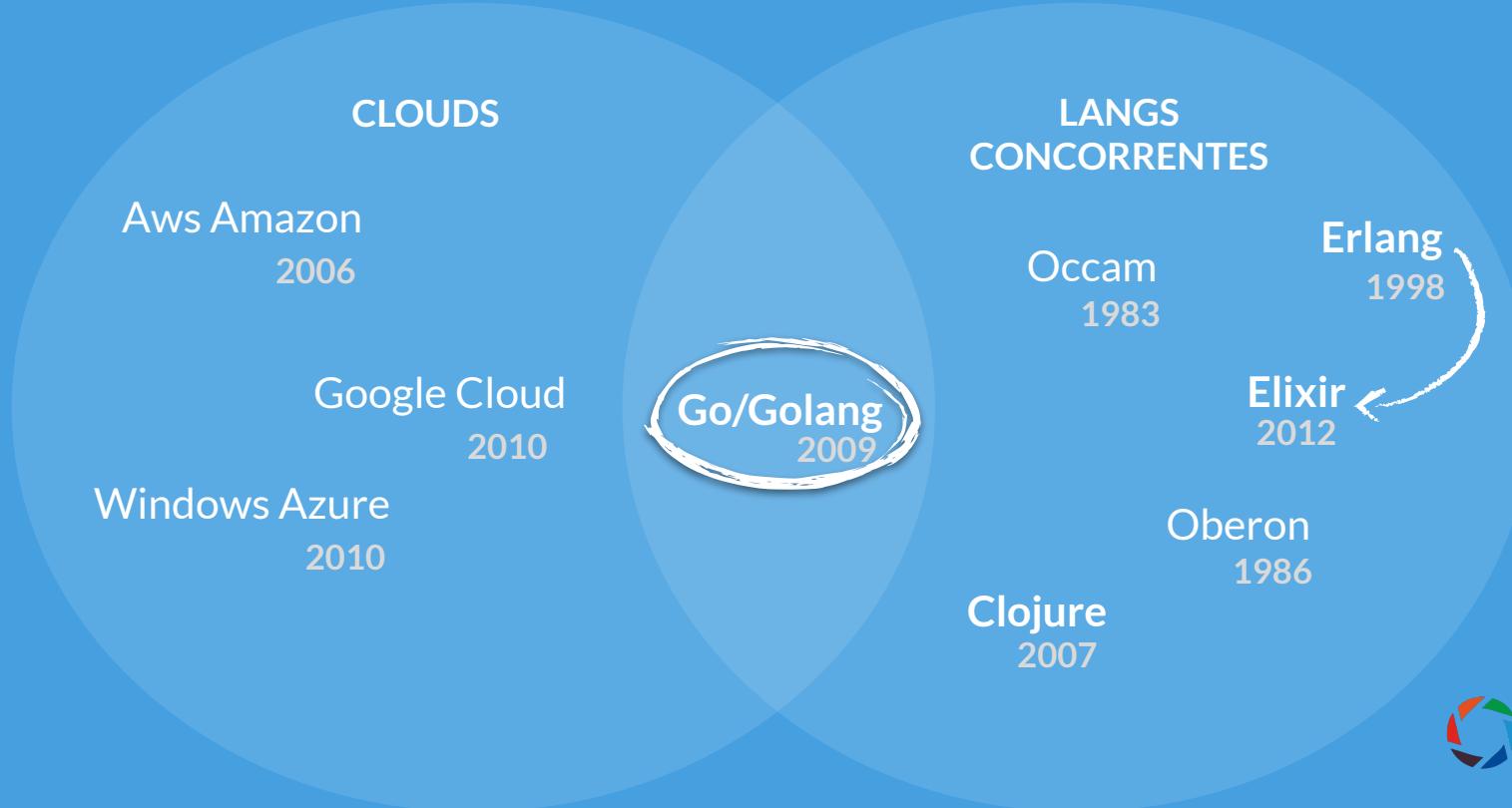


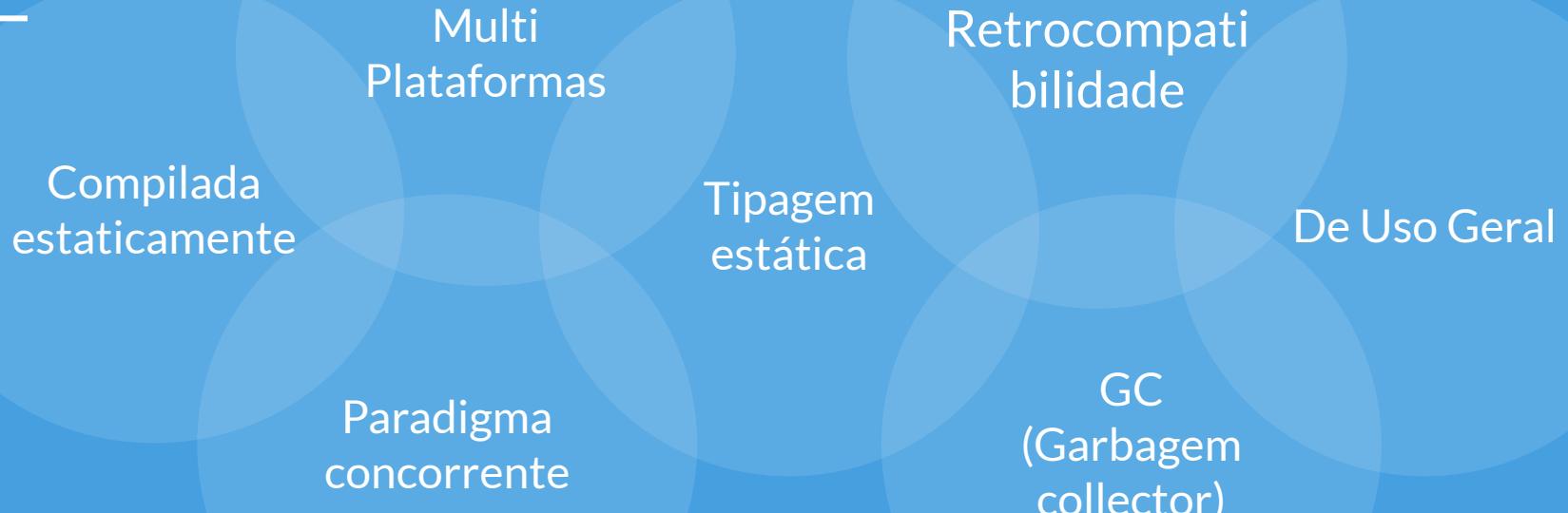
## Microservices Architecture





# Possíveis soluções







HashiCorp

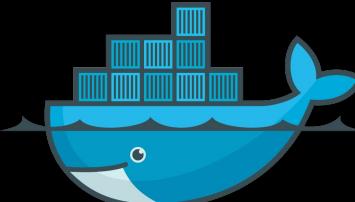
# Terraform



# kubernetes



# Caddy docker



A green rectangular button with a white border and rounded corners. Inside, there is an orange right-pointing arrow followed by a dark blue horizontal bar.

# Ritchie



JAEGER

```

    .d32b ..d32b.. .d32b32b 32b32b.
d32b"32b32b" "32b32b 32b 32b
32b 32b32b 32b"32b32b 32b
Y32b 32b32b..32b" X32b32b 32b
"Y32b" "Y32b" 32b32b"32b 32b
      32b
Y32b 32b32b
      32b

```



# Cockroach DB



# Grafana



# Dgraph



HashiCorp

# Packer



drone.io



 moby  
project



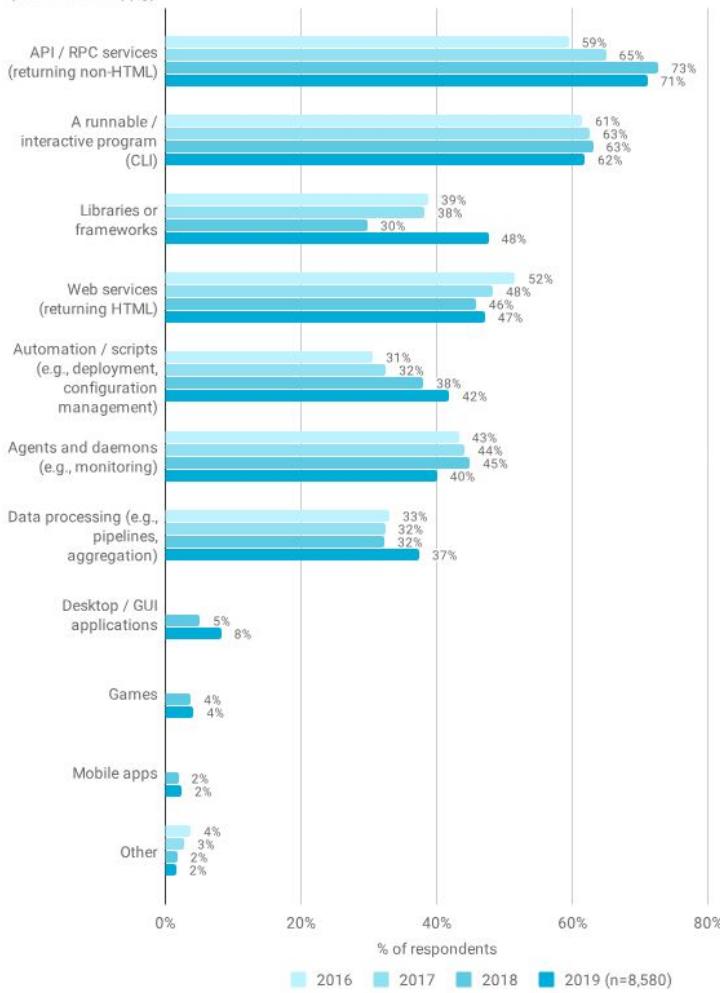
TDC  
ONLINE

@jeffoton



I write the following in Go:

(select all that apply)



## 1) API/RPC

## 2) CLI



## 3) Frameworks

## 4) Sistemas Web

<https://blog.golang.org/survey2019-results>



# 25 Keywords

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|          |             |        |           |        |
|----------|-------------|--------|-----------|--------|
| break    | default     | func   | interface | select |
| case     | defer       | go     | map       | struct |
| chan     | else        | goto   | package   | switch |
| const    | fallthrough | if     | range     | type   |
| continue | for         | import | return    | var    |





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# go Terminal UI



## Services Monitor

monitoring 8 services every 2s, press q to quit

## Status

Last update: May 3 15:57:01

### Services

|                    |       |           |       |           |
|--------------------|-------|-----------|-------|-----------|
| [R] people.serv... | Alloc | Gorout... | Sys   | HeapAl... |
| [R] events.serv... | 528KB | 9         | 3.8MB | 528KB     |
| [R] competitors... | 1.0MB | 15        | 40MB  | 1.0MB     |
| [R] geo.service    | 418KB | 9         | 3.8MB | 418KB     |
| [R] demo.service   | 693KB | 16        | 20MB  | 693KB     |
| [R] rest.service   | 121KB | 7         | 2.8MB | 121KB     |
| [R] web.members... | 899KB | 19        | 4.9MB | 899KB     |
| [R] web.admin.s... | 125KB | 5         | 2.8MB | 125KB     |
|                    | 124KB | 5         | 2.8MB | 124KB     |

### Alloc

|       |
|-------|
| 528KB |
| 1.0MB |
| 418KB |
| 693KB |
| 121KB |
| 899KB |
| 125KB |
| 124KB |

### Goroutines

|    |
|----|
| 9  |
| 15 |
| 9  |
| 16 |
| 7  |
| 19 |
| 5  |
| 5  |

### Sys

|       |
|-------|
| 3.8MB |
| 40MB  |
| 3.8MB |
| 20MB  |
| 2.8MB |
| 4.9MB |
| 2.8MB |
| 2.8MB |

### HeapAlloc

|       |
|-------|
| 528KB |
| 1.0MB |
| 418KB |
| 693KB |
| 121KB |
| 392KB |
| 1.4MB |
| 496KB |
| 456KB |

### HeapInUse

|       |
|-------|
| 888KB |
| 1.5MB |
| 784KB |
| 1.0MB |
| 429ms |
| N/A   |
| N/A   |
| N/A   |
| N/A   |

### ResponseLatency

|       |
|-------|
| N/A   |
| N/A   |
| N/A   |
| N/A   |
| 429ms |
| 392KB |
| 1.4MB |
| 496KB |
| 456KB |

### EnableGarbageCollection

|      |
|------|
| true |
| N/A  |
| N/A  |
| N/A  |
| N/A  |

### NumGC

|     |
|-----|
| 50  |
| 67  |
| 50  |
| 43  |
| 7   |
| 15  |
| 132 |
| 122 |

### PauseTime

|       |
|-------|
| 83ms  |
| 212ms |
| 71ms  |
| 102ms |
| 3ms   |
| 14ms  |
| 85ms  |
| 73ms  |

### Uptime

|        |
|--------|
| 12m29s |
| 12m29s |
| 12m29s |
| 12m29s |
| 23s    |
| 2m29s  |
| 12m29s |
| 12m29s |

### Monitoring memstats.Alloc

people.service (max: 549KB)

events.service (max: 1.2MB)

competitors.service (max: 549KB)

geo.service (max: 1.0MB)

demo.service (max: 220KB)

rest.service (max: 1.7MB)

web.members.service (max: 222KB)

web.admin.service (max: 221KB)

### Monitoring Goroutines

people.service (max: 9)

events.service (max: 15)

competitors.service (max: 9)

geo.service (max: 16)

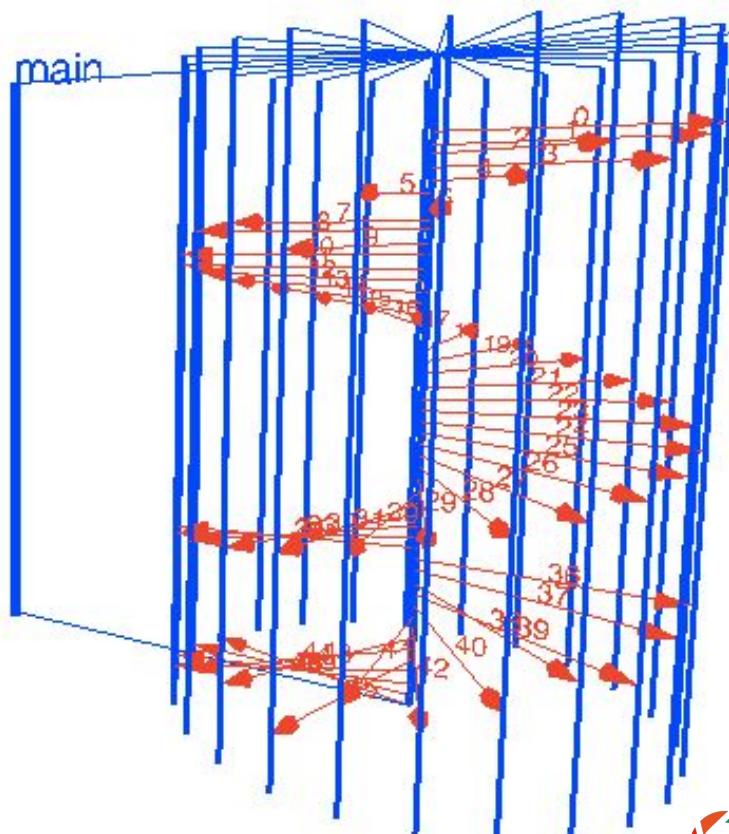
demo.service (max: 7)

rest.service (max: 19)

web.members.service (max: 6)

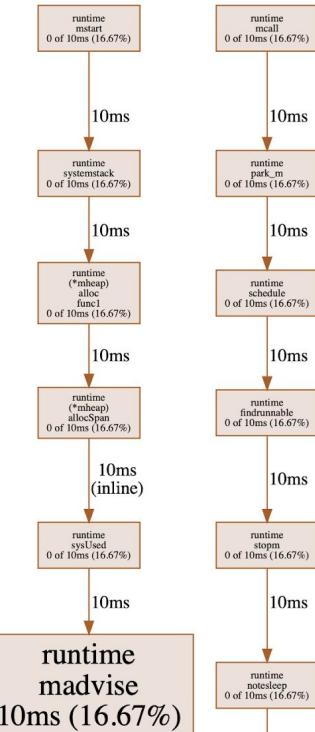
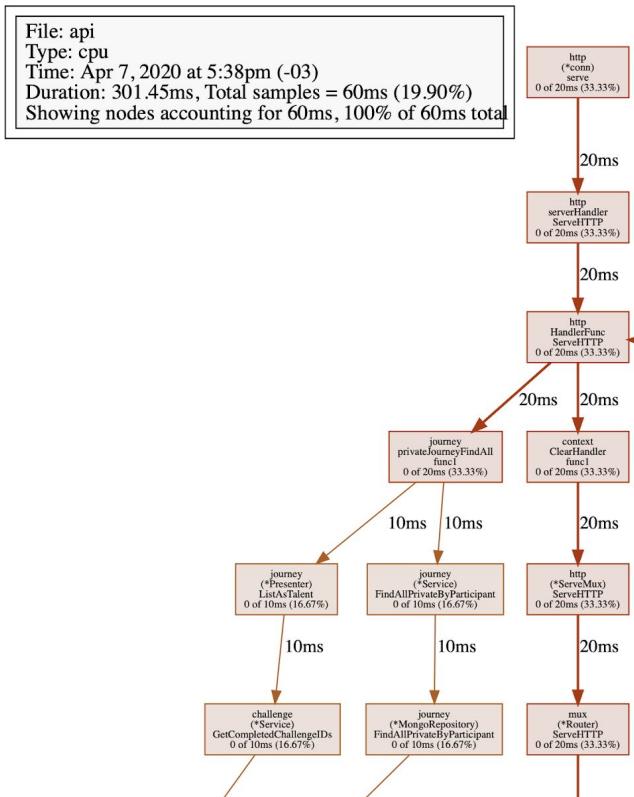
web.admin.service (max: 5)

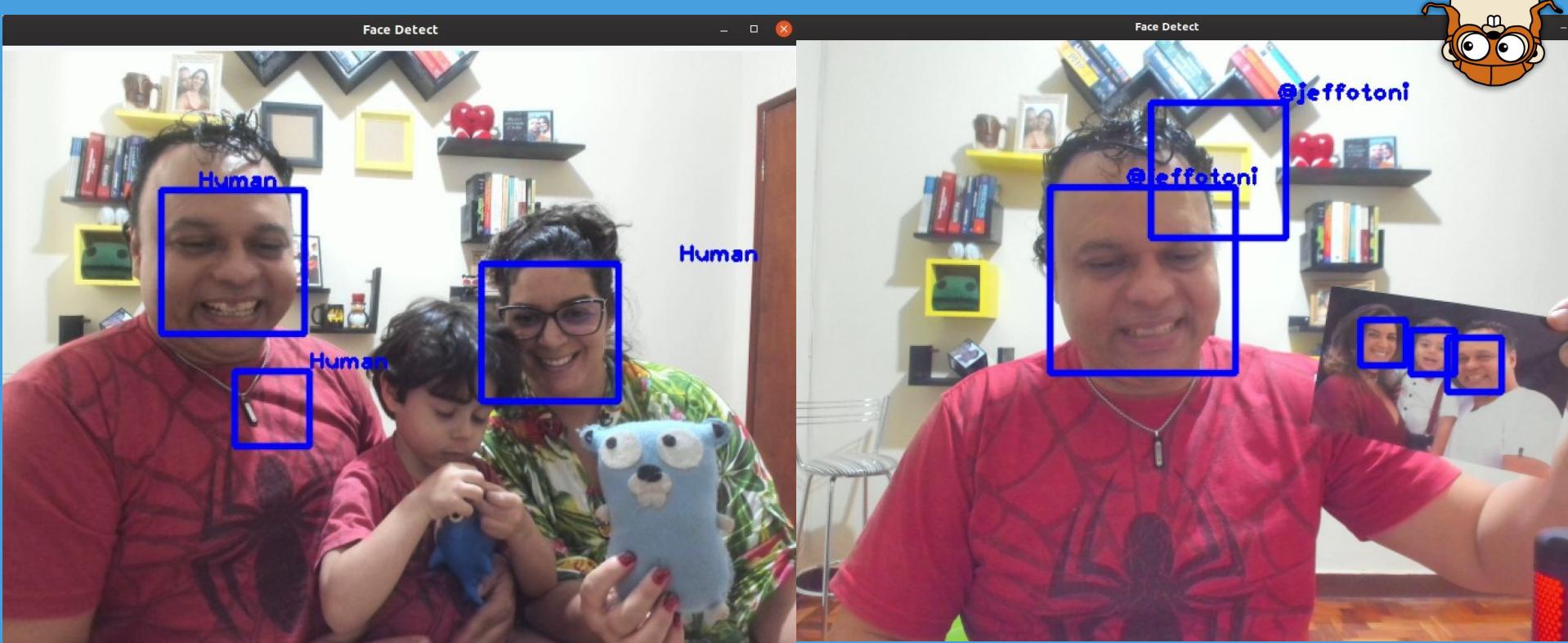
# Goroutines





# Pprof Profiling Go





[gocv.io/x/gcov](https://gocv.io/x/gcov)  
<https://opencv.org/>

**Sheimy Rahman - Classify things in**

<https://www.youtube.com/watch?v=2cCiO4MlzbM&t=4130s>



λ

Thanks := &Obrigado{...}

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# Obrigado...



[github.com/jeffotoni](https://github.com/jeffotoni)



[instagram.com/jeffotoni](https://instagram.com/jeffotoni)



[linkedin.com/in/jeffotoni](https://linkedin.com/in/jeffotoni)



[https://t.me/go\\_br](https://t.me/go_br)



<https://t.me/awsbrasil>



<https://t.me/devopsbh>

