

# evolution of a gopher

francesc

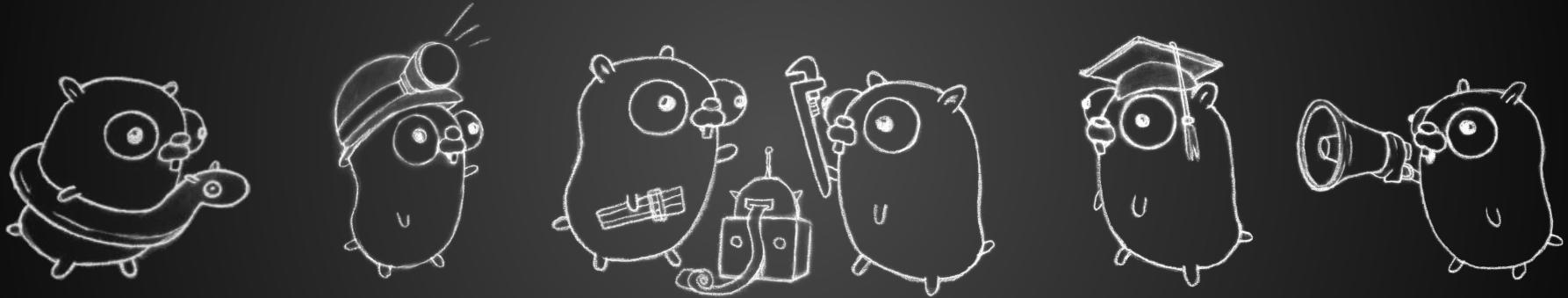
# about me

- Developer Advocate for the Google Cloud Platform
- Developer Programs Engineer for the Go team since 2012
- Lover of all programming languages
- Instructor at Google

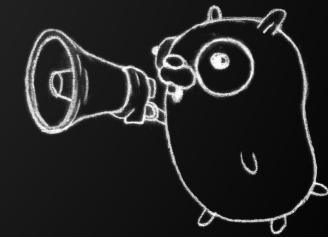
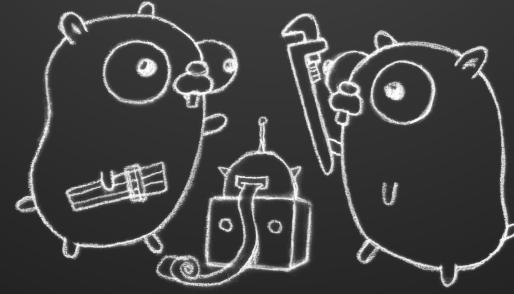
@francesc

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

# about this talk



Inspired “evolution of a developer” by Raquel Velez (@rockbot)



# the phases of evolution

## 1. the newcomer



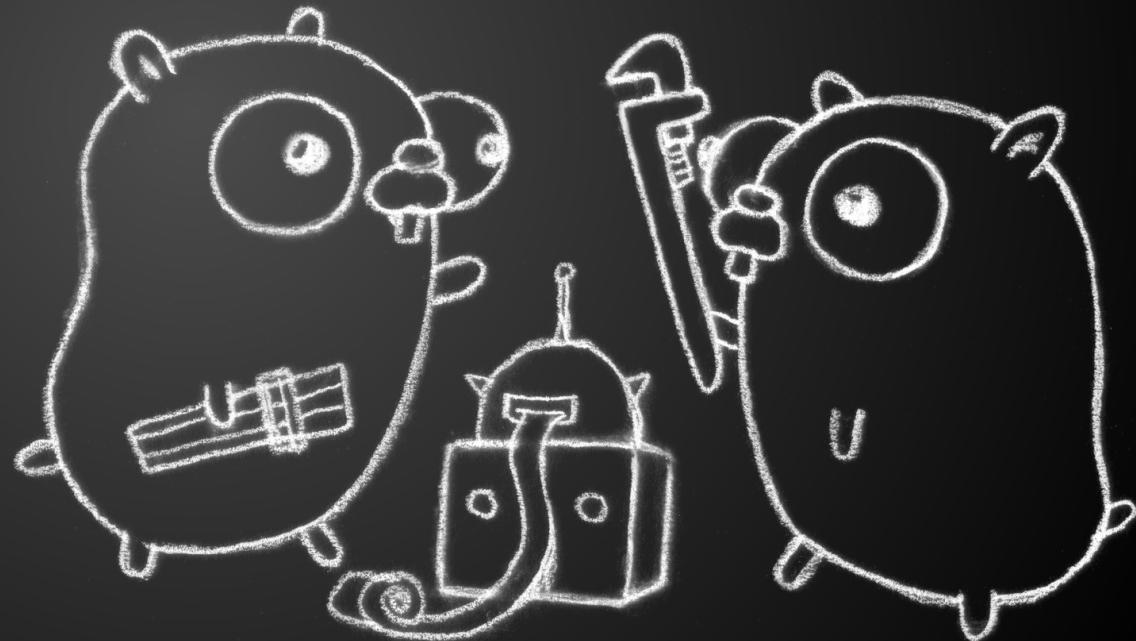
# the phases of evolution

1. the newcomer
2. the explorer



# the phases of evolution

1. the newcomer
2. the explorer
3. the builder



# the phases of evolution

1. the newcomer
2. the explorer
3. the builder
4. the expert







# the newcomer

First steps:

- tutorials
- workshops

Concepts:

- syntax
- slices and maps
- functions, types, and methods



# playing around

create small programs, toy projects

main resources:

- go tour
- go playground
- documentation
- golang-nuts/slack/irc



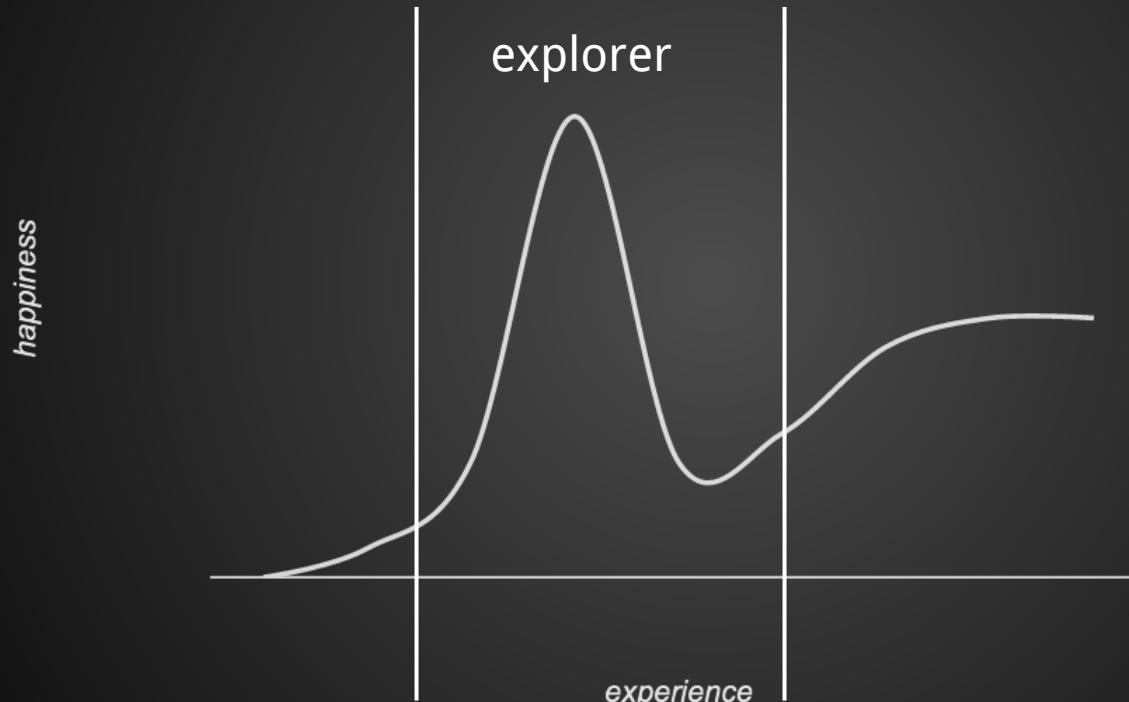


# the explorer

- write some small projects
- still gets lost
  - many new things to learn
  - but knows where to find help and ask questions



# learning curve



*note: this graphic is absolutely not scientific*



# the peak of inflated expectations

Go is awesome, I can do everything!

"let me migrate this framework to Go"

But to improve something we have to understand it first.



*inflated expectations lead to painful  
realizations*



# the trough of disillusionment

But I miss X feature from Y language!

Use the language as is and have fun.

The standard library is very useful.



# Fighting the disillusionment

Try new things

- go generate
- Go on Android



# jsonenums

- parsing with go/ast
- generation with text/template

[github.com/campoy/jsonenums](https://github.com/campoy/jsonenums)



```
package painkiller

//go:generate jsonenums -type=Pill

type Pill int

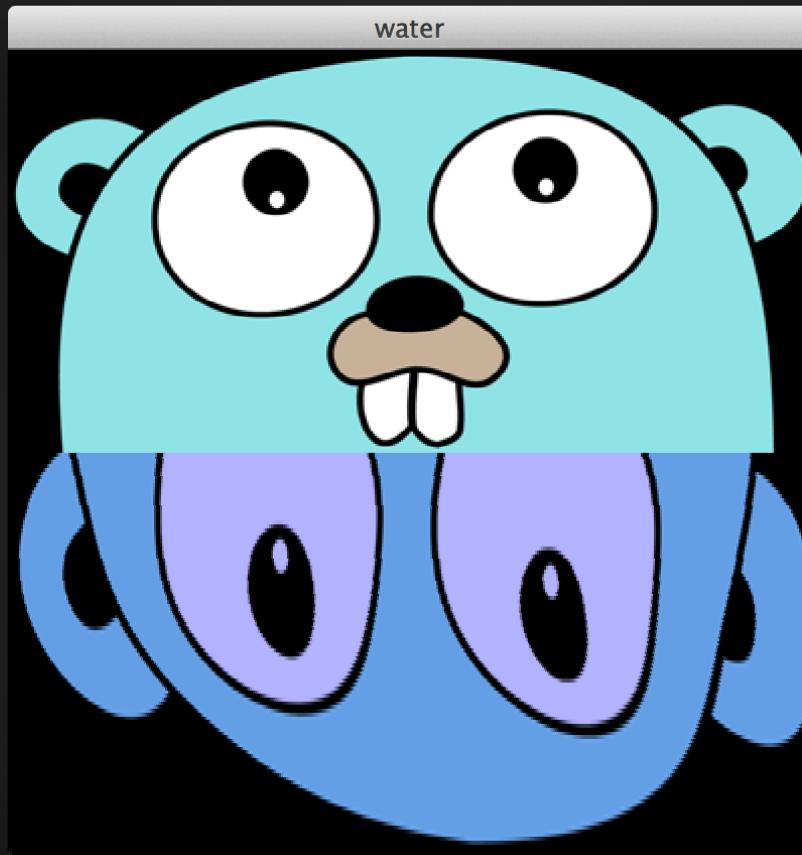
const (
    Placebo Pill = iota
    Aspirin
    Ibuprofen
    Paracetamol
    Acetaminophen = Paracetamol
)
```



```
var _PillValueToName = map[Pill]string{
    Placebo: "Placebo", Aspirin: "Aspirin", ...
}
```

```
func (r Pill) MarshalJSON() ([]byte, error) {
    s, ok := _PillValueToName[r]
    if !ok {
        return nil, fmt.Errorf("invalid Pill: %d", r)
    }
    return json.Marshal(s)
}
```



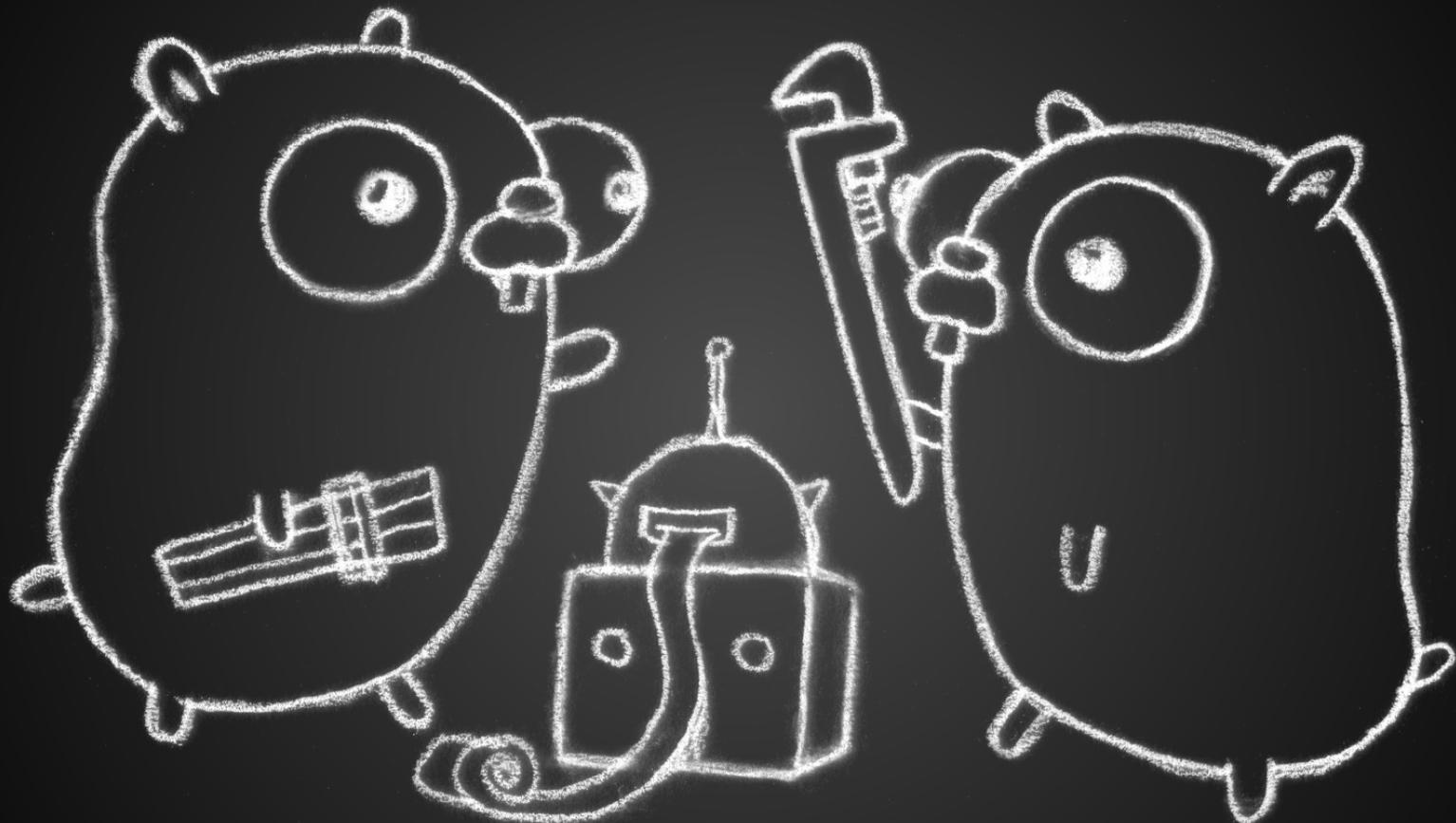


# Challenges and competitions

[gophergala.com](http://gophergala.com)

[golang-challenge.com](http://golang-challenge.com)



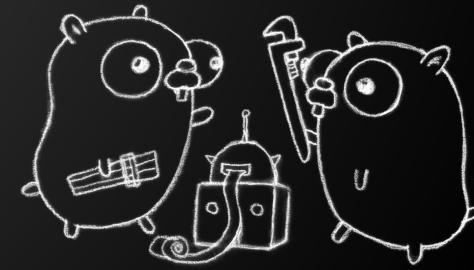


# the builder

Solve a problem you care about

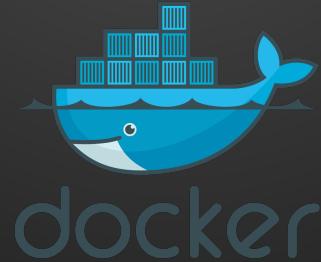
New problems lead to new questions

And sometimes new solutions



# contribute to an existing project

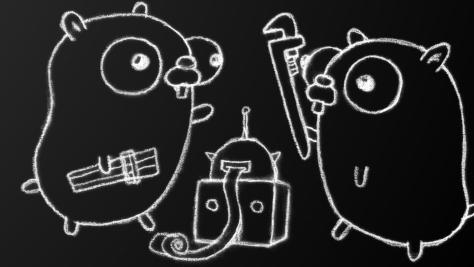
- Go
- Docker
- Kubernetes
- Many other: [github.com/golang/go/wiki/Projects](https://github.com/golang/go/wiki/Projects)



# tooling

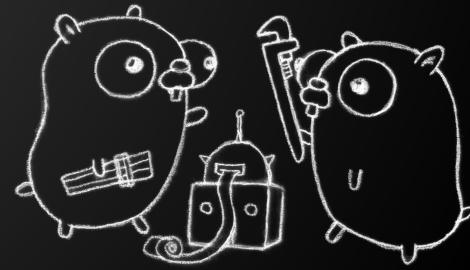
things that matter when you build stuff

- go get/build/install/run
- go generate
- govet
- go test -race
- gofmt, goimports, goreturns



# Before goimports

```
func main() {  
    fmt.Println("hello")  
}
```

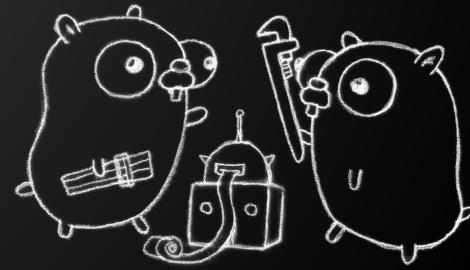


# After goimports

```
package main

import "fmt"

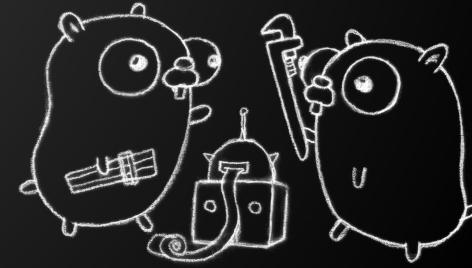
func main() {
    fmt.Println("hello")
}
```



# Before goretturns

```
package foo
```

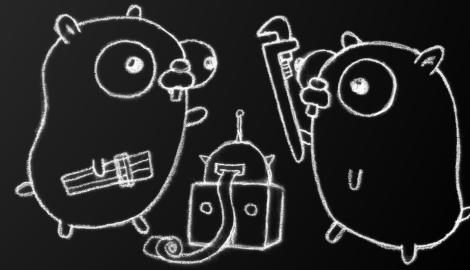
```
func count() (int, error) {
    if err := check(); err != nil {
        return err
    }
    return n, nil
}
```



# After goreturns

```
package foo
```

```
func count() (int, error) {
    if err := check(); err != nil {
        return 0, err
    }
    return n, nil
}
```

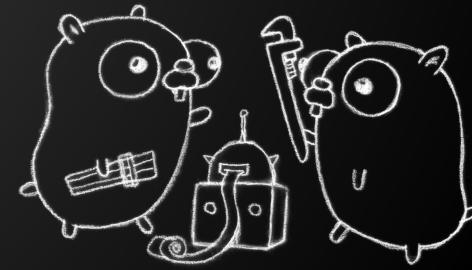


code reviews

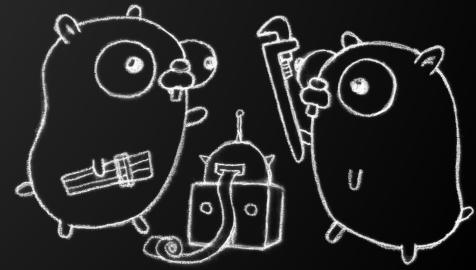
# code reviews

Intent:

- fix mistakes
- uniformize code style
- improve quality of software
- improve developers' skill

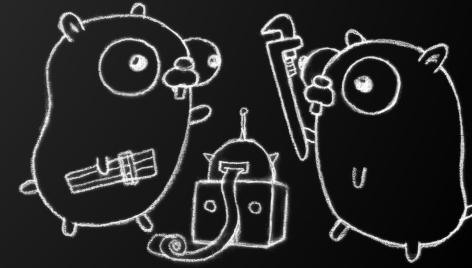


*coding culture spreads via code reviews*



# code reviews

Learning and teaching opportunity





# the expert

- specs
- philosophy
- recognition



# Go is “just” a tool

As any other programming language

- it can be very advanced
- or hard to master

but

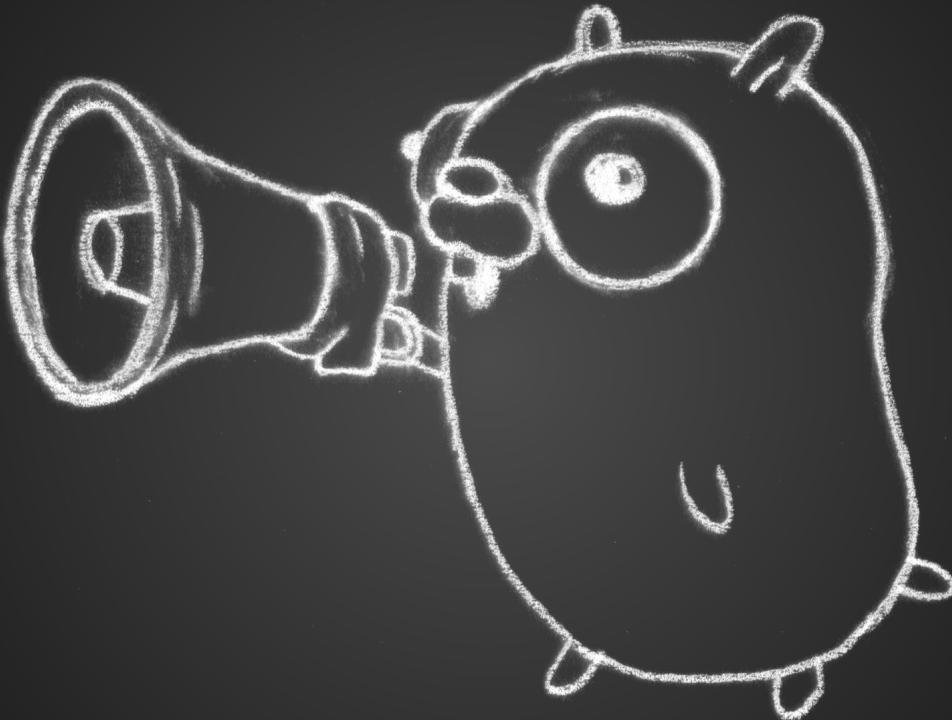
- it is the means to an end



# Why using just a tool?

- Different points of view
- Synergy between different languages
- Idiomatic adaptation of idioms

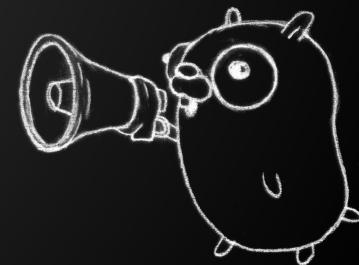




# the advocate

share your knowledge:

- write
- talk
- complain



# Go Meetups

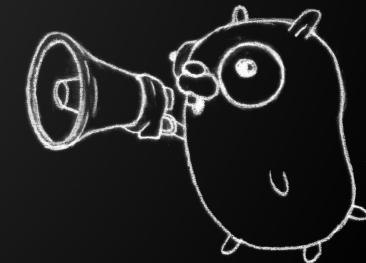
This is a list of all the groups in meetup.com that mention #golang as one of its topics. The list is ordered by number of members and you can apply filters to any column. The continent for each country is obtained using Freebase.

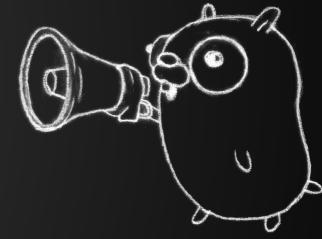
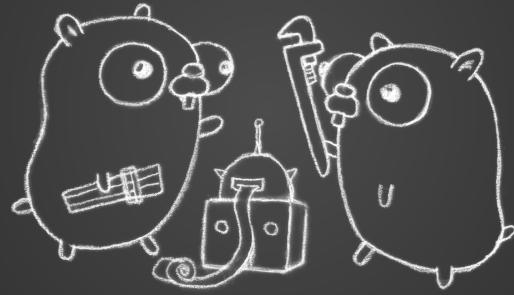
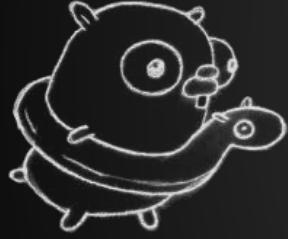
Name	City	Country	Continent	Members
filter	filter	filter	Asia	1890
Golang Bangalore	Bangalore	IN	Asia	375
Golang Москва	Moscow	RU	Europe, Asia	355
GoSG	Singapore	SG	Asia	259
Golang Pune	Pune	IN	Asia	156
Go Israel	Ramat Gan	IL	Asia	125
Golang Teahouse Beijing	Beijing	CN	Asia	98
Istanbul Golang	Istanbul	TR	Europe, Asia	90
Tokyo Golang Developers	Tokyo	JP	Asia	84
Delhi NCR Go Meetup Group	Delhi	IN	Asia	77

# the advocate

Gophers of every level of experience

- top down
  - help gophers learn
- bottom up
  - make the community more welcoming







thanks  
@francesc