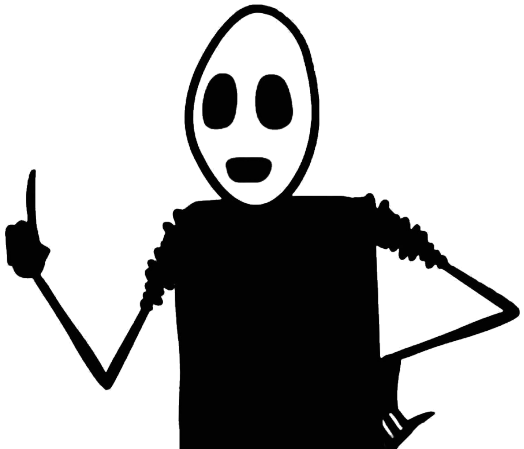
State of Kotlin Ecosystem

Ruslan Ibragimov / ibragimov.by

План

1. Проекты
    a. JVM
    b. Android
    c. JS
    d. Native
2. Популярность Kotlin
3. Ресурсы для изучения



Краткий
Безопасный
Совместимый
Поддержка IDE

Kotlin/JVM

spring
by Pivotal™

Spring

- написали экстеншенов
- разметили API с помощью @NotNull аннотаций
- учитывают Null/NotNull типы в MVC
- ...

https://docs.spring.io/spring/docs/current/spring-framework-reference/languages.html#kotlin

Bad Java + Kotlin

```
// Kotlin

@Component
class ЭтоБудетКомпонентСпринга
```

```
// Java

@Component
public final class ЭтоБудетКомпонентСпринга
```

Bad Java + Kotlin

```
// Kotlin

@Component
open class ЭтоБудетКомпонентСпринга
```

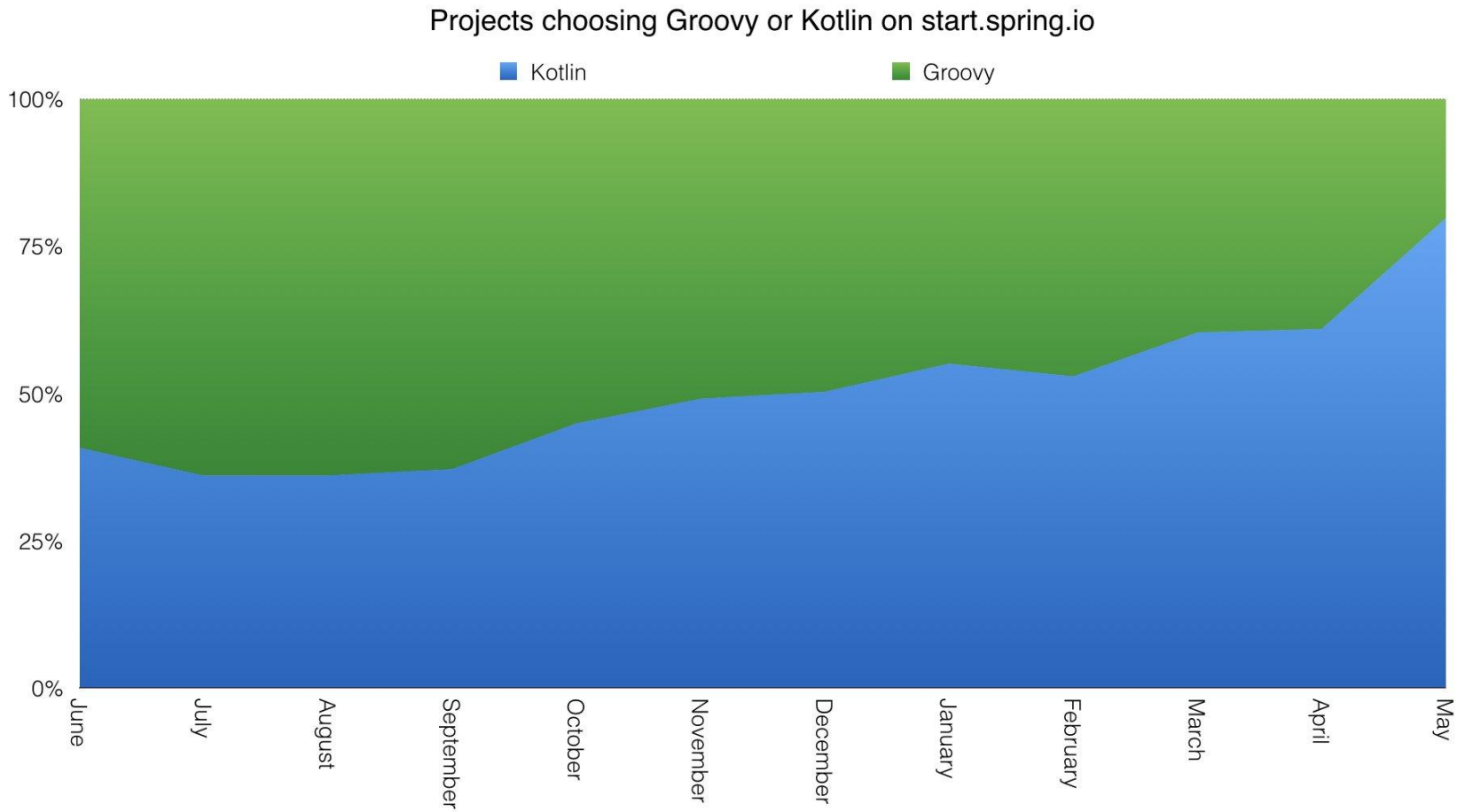
```
// Java

@Component
public class ЭтоБудетКомпонентСпринга
```

Bad Java + Kotlin

// Compiler Plugins:

kotlin-allopen (kotlin-spring)

koltin-noarg (kotlin-jpa)



https://twitter.com/ankinson/status/874656449665880065

Andy Wilkinson
@ankinson

Follow

Replying to @heapyhop

No new graphs, but the trend continues. Java dominates. Kotlin is gaining in popularity.

4:54 PM - 13 Mar 2018

1 1

https://twitter.com/ankinson/status/874656449665880065

VERT.X

Vert.x

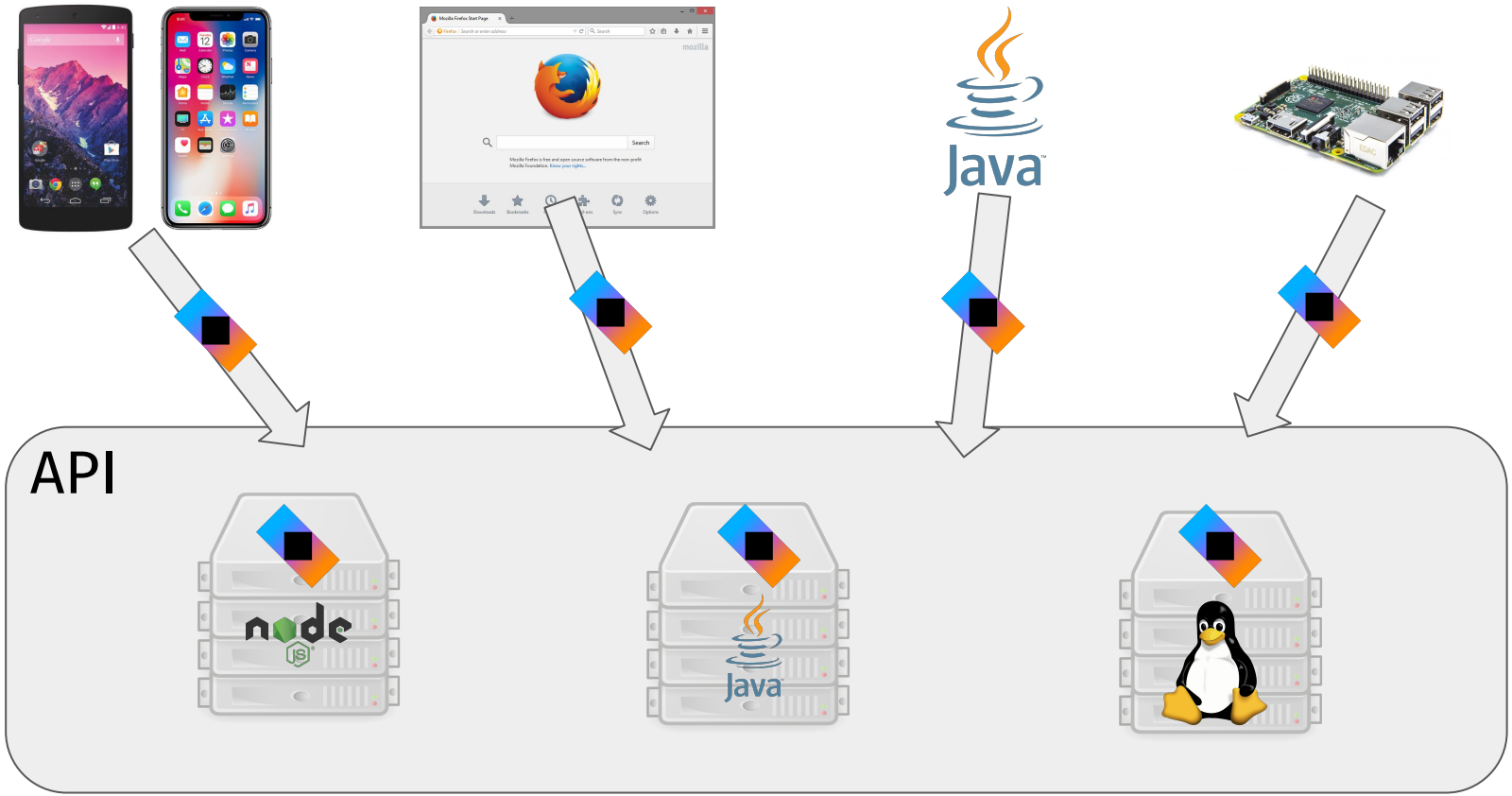
```
val vertx = Vertx.vertx()
vertx.deployVerticle(ExampleVerticle())

launch(vertx.dispatcher()) {
   val timerId = awaitEvent<Long> { handler ->
       vertx.setTimer(1000, handler)
   }
   println("Event fired from timer with id ${timerId}")
}
```

https://github.com/vert-x3/vertx-lang-kotlin
http://vertx.io/docs/vertx-lang-kotlin-coroutines/kotlin/

+

Ktor

★ 2400



Мультиплатформа

https://bkug.by/2018/02/23/otchet-o-bkug-8/

jackson-module-kotlin

400

kotlinx.serialization

480

klaxon

660

Kodein/Injekt

1000

Kodein/Injekt

```
val kodein = Kodein {
   bind<Dice>() with provider { RandomDice(0, 5) }
   bind<DataSource>() with singleton { SqliteDS.open("path/to/file") }
}

class Controller(private val kodein: Kodein) {
   private val ds: DataSource = kodein.instance()
}
```

kategory/funKtionale

kategory + funKtionale = Λrrow

1100

http://arrow-kt.io/

Λrrow

- тайпклассы (как бы)
- фп типы: Option, Try, Either
- интеграции: Rx2, Coroutines

ReactiveX/RxKotlin

3900

Exposed

1200

Exposed

```
object Users : Table() {
  val id = varchar("id", 10).primaryKey() // Column<String>
  val name = varchar("name", length = 50) // Column<String>
  val cityId = (integer("city_id") references Cities.id).nullable() // Column<Int?>
}
```

Exposed

```
Database.connect("jdbc:h2:mem:test", driver = "org.h2.Driver")

transaction {
    create(Users)

    Users.insert {
        it[id] = "sergey"
        it[name] = "Sergey"
        it[cityId] = munichId
    }
}
```

Spek

1100

Spec

```
class SimpleTest : Spek({
  describe("a calculator") {
    val calculator = SampleCalculator()

    it("should return the result of adding the first number to the second number") {
      val sum = calculator.sum(2, 4)
      assertEquals(6, sum)
    }

    it("should return the result of subtracting the second number from the first number") {
      val subtract = calculator.subtract(4, 2)
      assertEquals(2, subtract)
    }
  }
})
```

KotlinTest

700

JUnit 5.1

mockito-kotlin

1000

MockK

400

TornadoFX

1400

kotlinx.coroutines

1800

kotlinx.html

345

kotlinx.html

```
System.out .appendHTML().html {
   body {
       div {
           a("http://kotlinlang.org") {
               target = ATarget.blank
               +"Main site"
           }
       }
   }
}
```

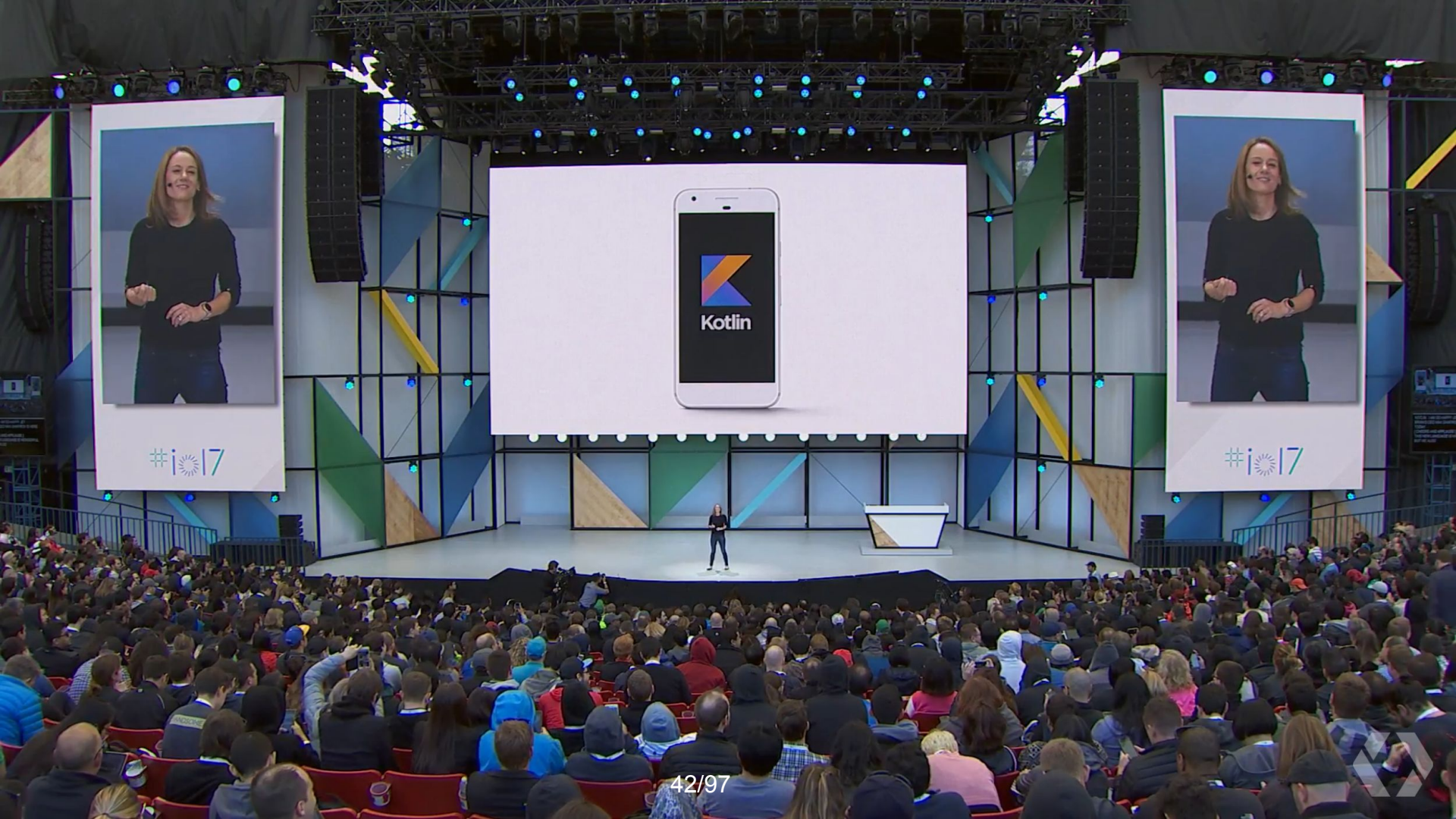
kscript

360

square/kotlinpoet

★ 1400

Kotlin/Android


#io17
Kotlin
#io17

IN ALL
NOTHER
ICK

Anko

10000

Anko

Anko Commons

Anko Layouts

Anko SQLite

Anko Coroutines

android/ktx

5200

google/flexbox-layout

★ 10900

kotterknife

1900

Koin

900

Kotlin/JS

kotlinx.coroutines

1800

create-react-kotlin-app

1300

Aza-Kotlin-CSS

50

Aza-Kotlin-CSS

```
val css = Stylesheet {
  a {
    width = 10.px
    color = 0xffffff
    opacity = .8

    hover {
      color = 0xf2cacf
    }
  }
}

css.render()
```

ts2kt

200

kotlin-fullstack-sample

700

Kotlin/Native

JetBrains/kotlinconf-app

1300

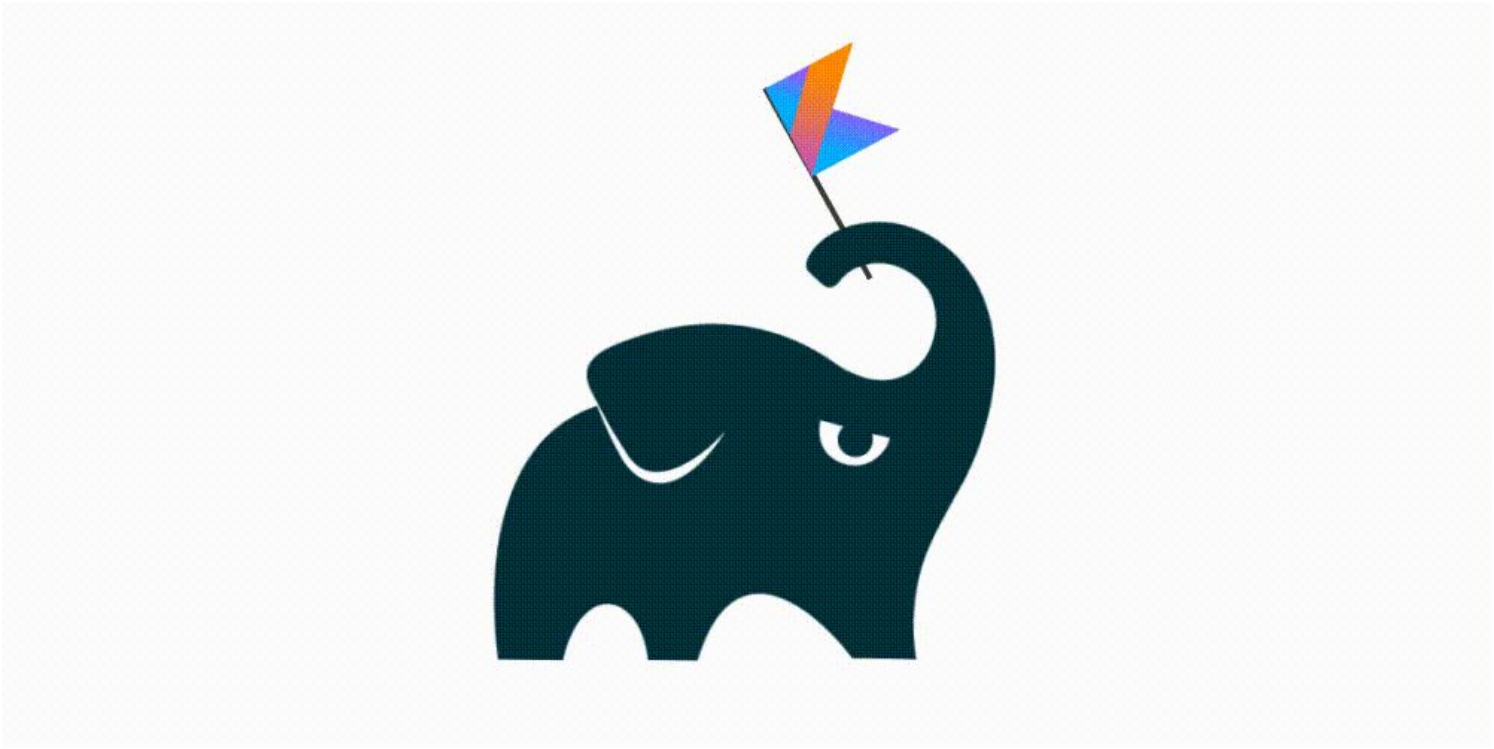
Kotlin/Native

- https://bkug.by/2018/02/23/otchet-o-bkug-8
- https://soundcloud.com/podlodka/podlodka-50-kotlin-i-swift

Tools

Kobalt

340



Gradle Kotlin DSL

1350

ktlint

800

detekt

900

Fabrice Bellingard
@bellingard

Follow

Replying to @benjohnde

On our side, built-in support for Kotlin in @SonarQube & @sonarcloud is planned for this year.

11:06 PM - 20 Feb 2018

22 Retweets **41** Likes

1 22 41

dokka

550

Проекты на Котлин

- Rust плагин для Intellij
- Clojure IDE - Cursive
- LWJGL - кроссплатформенный доступ к OpenGL, OpenAL, OpenCL
- Komputation - ML, нейронные сети
- zally - API linter от Zalando

Рейтинги

Февраль 2016 - 168

Сентябрь 2016 - 99

Июнь 2017 - 43

Март 2018 - 38

https://www.tiobe.com/tiobe-index/

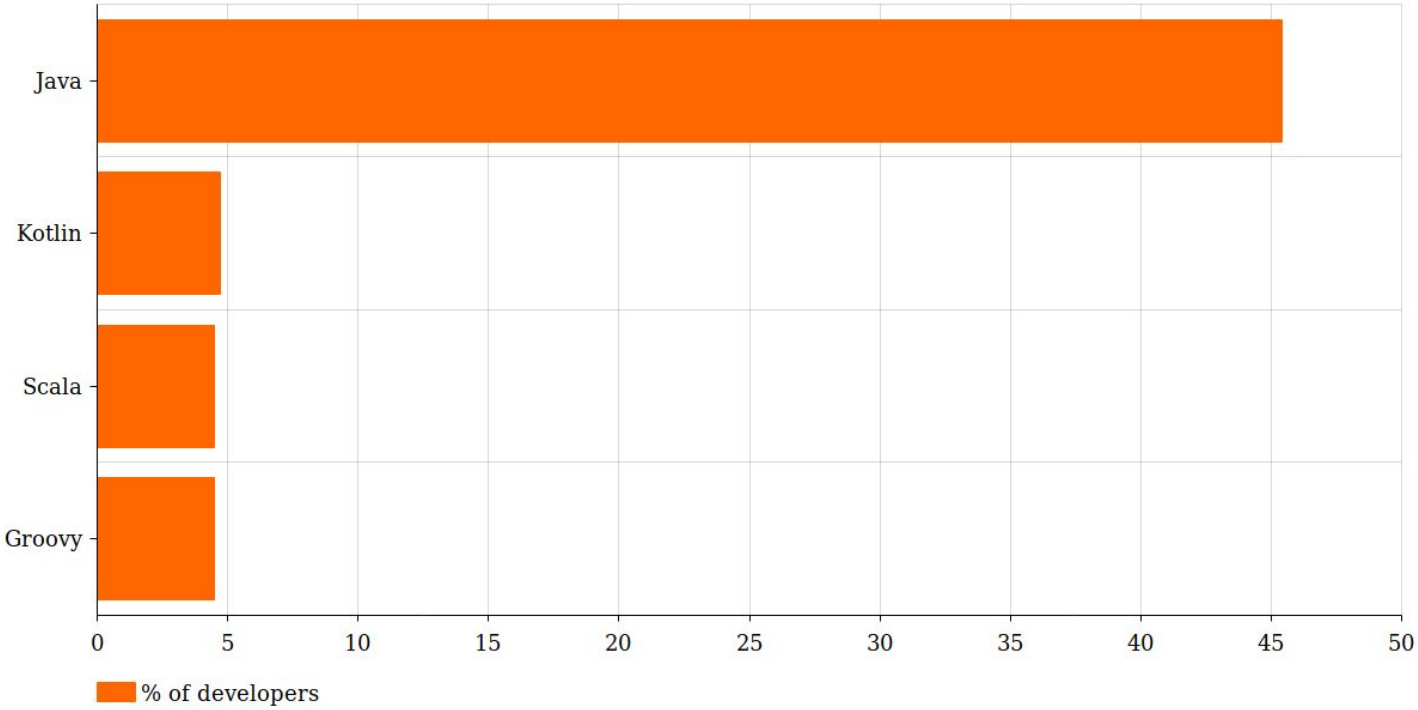
PYPL

Rank	Change	Language	Share	Trend
1		Java	22.7 %	-0.8 %
2		Python	21.69 %	+5.4 %
3	↑↑	Javascript	8.53 %	+0.3 %
4	↓	PHP	8.33 %	-1.7 %
5	↓	C#	7.99 %	-0.7 %
6		C	6.42 %	-1.3 %
7	↑	R	4.23 %	+0.4 %
8	↓	Objective-C	3.81 %	-1.1 %
9		Swift	3.0 %	-0.6 %
10		Matlab	2.39 %	-0.4 %
11		Ruby	1.72 %	-0.4 %
12	↑↑↑	TypeScript	1.52 %	+0.4 %
13		VBA	1.42 %	+0.0 %
14	↓↓	Visual Basic	1.26 %	-0.3 %
15	↓	Scala	1.21 %	-0.0 %
16	↑↑↑↑↑↑	Kotlin	0.9 %	+0.8 %

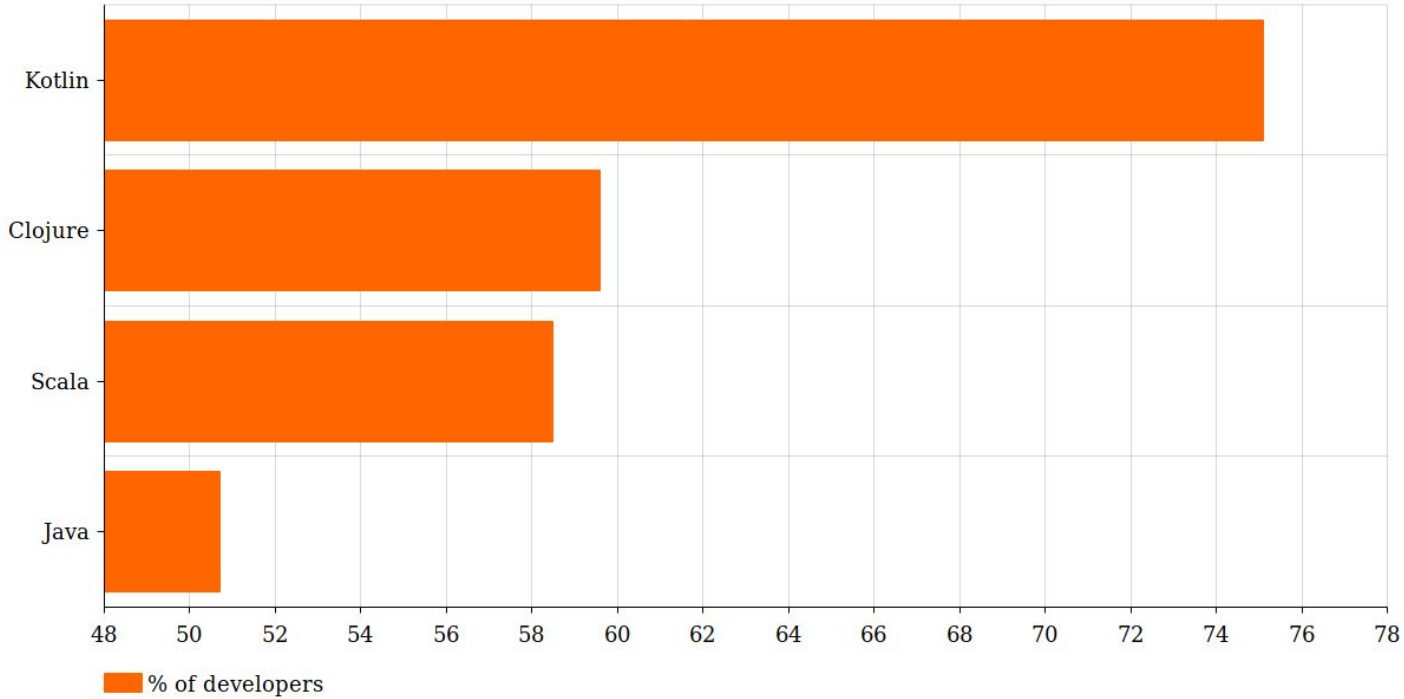
https://pypl.github.io/PYPL.html

https://insights.stackoverflow.com/survey/2018

stackoverflow



stackoverflow

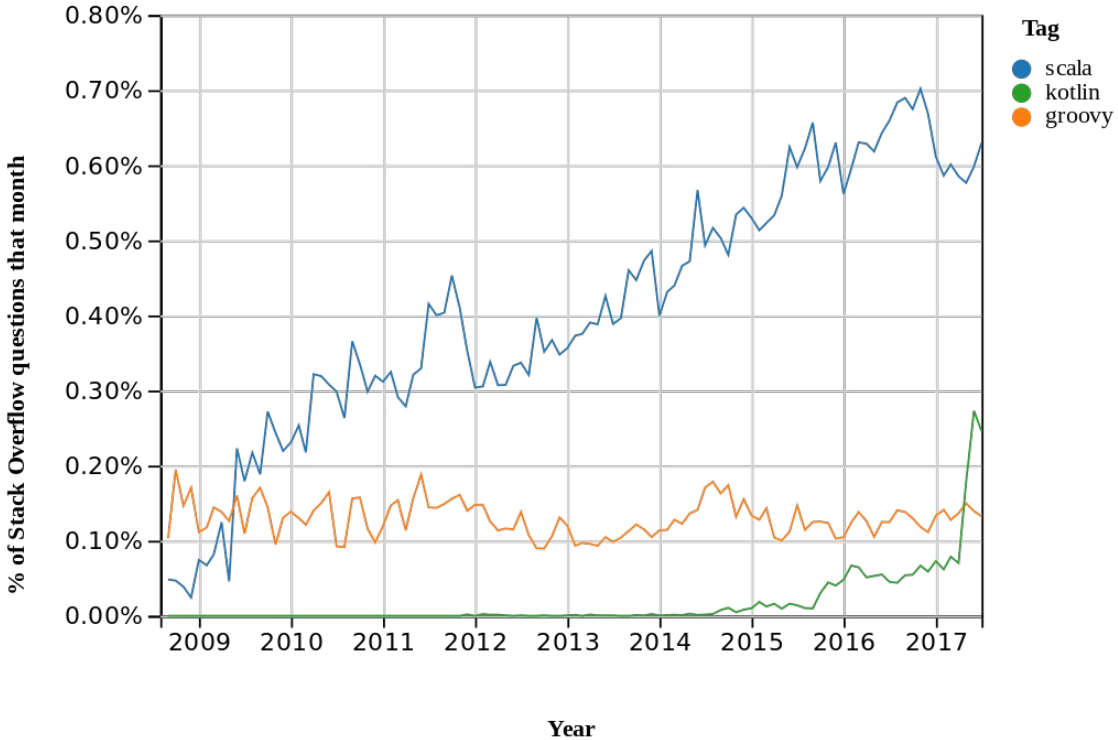


stackoverflow

½ - Java

⅔ - Groovy

stackoverflow



https://insights.stackoverflow.com/trends?tags=kotlin%2Cgroovy%2Cscala

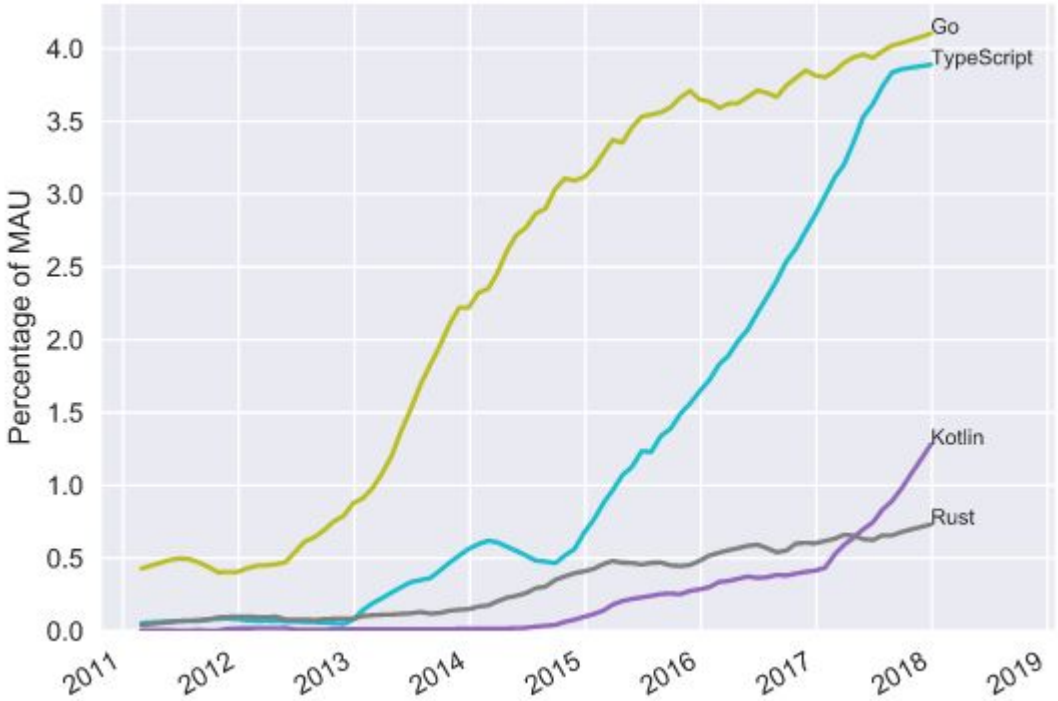
stackoverflow

stackoverflow

GitHub

http://www.benfrederickson.com/ranking-programming-languages-by-github-users/

GitHub


Percentage of MAU
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
2011
2012
2013
2014
2015
2016
2017
2018
2019
Go
TypeScript
Kotlin
Rust

GitHub

Java - 14%

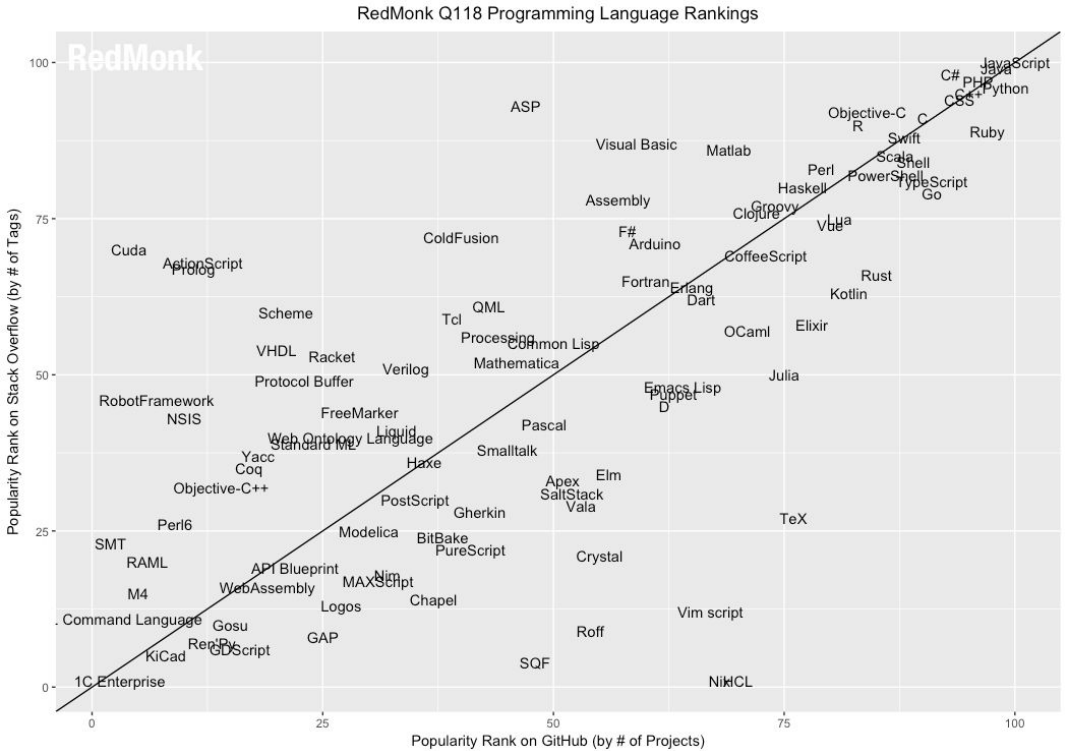
Kotlin - 1.28%

Scala - 0.78%

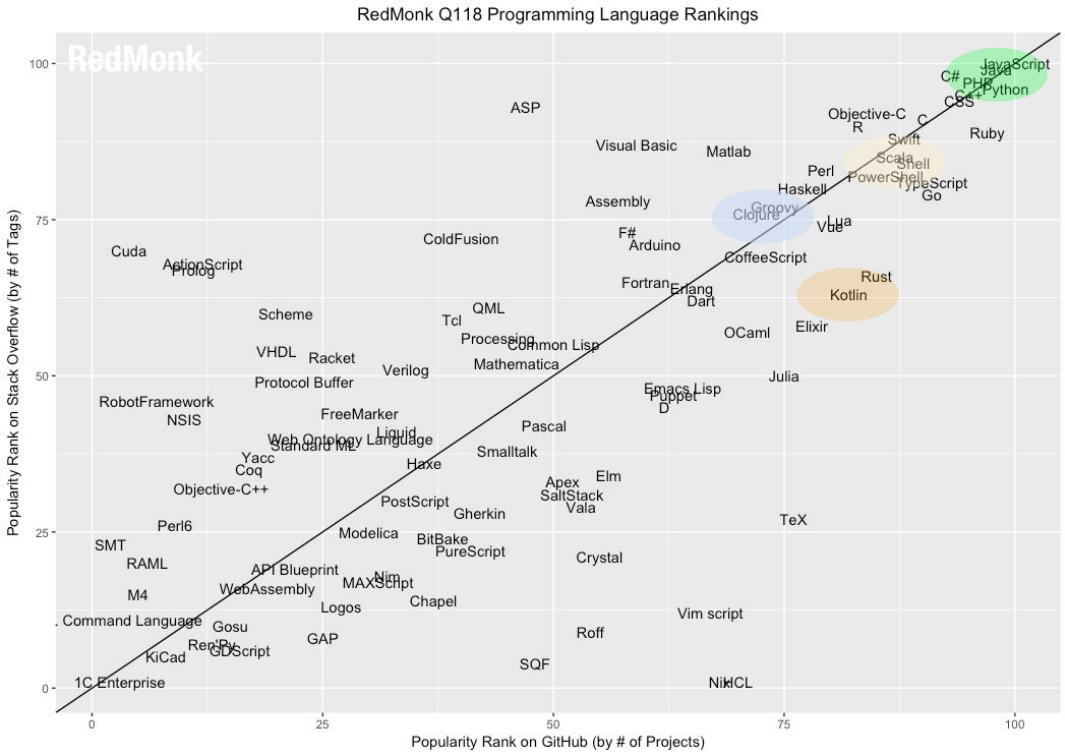
Groovy - 0.4%

https://redmonk.com/sogrady/2018/03/07/language-rankings-1-18/

RedMonk


RedMonk Q118 Programming Language Rankings
RedMonk
Popularity Rank on Stack Overflow (by # of Tags)
Popularity Rank on GitHub (by # of Projects)
0
25
50
75
100
JavaScript
Java
C#
PHP
Python
C++
CSS
Objective-C
R
C
Ruby
Swift
Scala
Shell
Perl
PowerShell
TypeScript
Go
Haskell
Groovy
Clojure
Lua
Vue
ASP
Visual Basic
Matlab
Assembly
F#
Arduino
CoffeeScript
Rust
Kotlin
Fortran
Erlang
Dart
Elixir
OCaml
ColdFusion
Cuda
ActionScript
Prolog
Scheme
Tcl
QML
Processing
Common Lisp
Mathematica
VHDL
Racket
Verilog
Julia
Protocol Buffer
Emacs Lisp
Puppet
D
RobotFramework
NSIS
FreeMarker
Liquid
Pascal
Web Ontology Language
Standard ML
Smalltalk
Yacc
Coq
Haxe
Apex
Elm
SaltStack
Vala
Objective-C++
PostScript
Gherkin
TeX
Perl6
Modelica
BitBake
SMT
PureScript
Crystal
RAML
API Blueprint
Nim
MAXScript
WebAssembly
M4
Chapel
Logos
Vim script
Command Language
Gosu
Roff
GAP
KiCad
GDScript
SQF
1C Enterprise
NikiCL

RedMonk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0
25
50
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JavaScript
Java
C#
PHP
Python
CSS
C++
Objective-C
R
C
Ruby
Swift
Scala
Shell
PowerShell
Perl
TypeScript
Haskell
Go
Assembly
Groovy
Clojure
Lua
Vue
F#
Arduino
ColdFusion
Cuda
ActionScript
Prolog
CoffeeScript
Fortran
Erlang
Dart
Rust
Kotlin
Scheme
Tcl
QML
Processing
Common Lisp
OCaml
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RobotFramework
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FreeMarker
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Web Ontology Language
Standard ML
Smalltalk
Yacc
Coq
Haxe
Apex
Elm
SaltStack
Vala
Objective-C++
PostScript
Gherkin
TeX
Perl6
Modelica
BitBake
SMT
PureScript
Crystal
RAML
API Blueprint
Nim
MAXScript
WebAssembly
M4
Chapel
Logos
Vim script
Command Language
Gosu
Roff
GAP
KiCad
GDScript
SQF
1C Enterprise
NikiCL

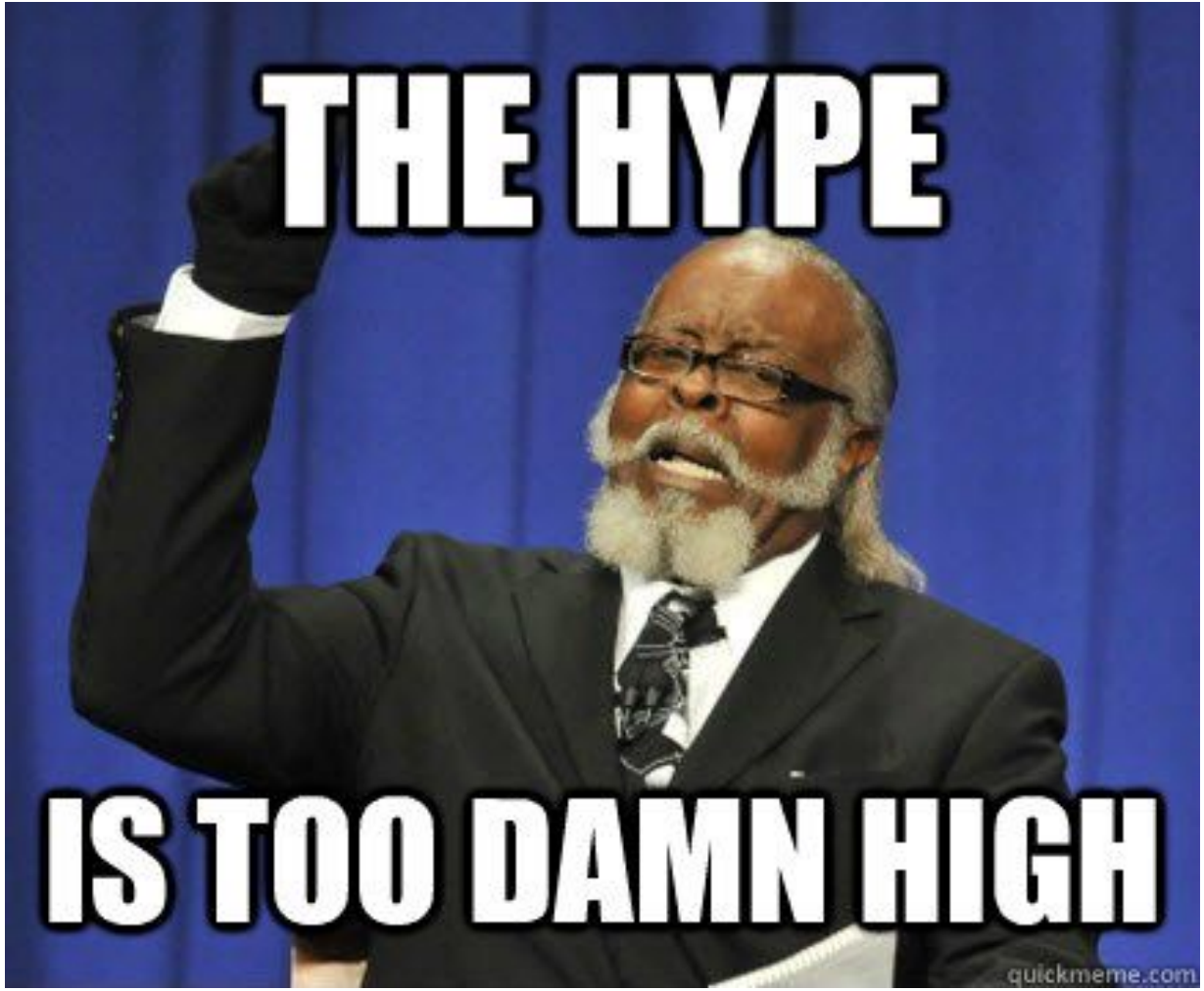
Сообщество

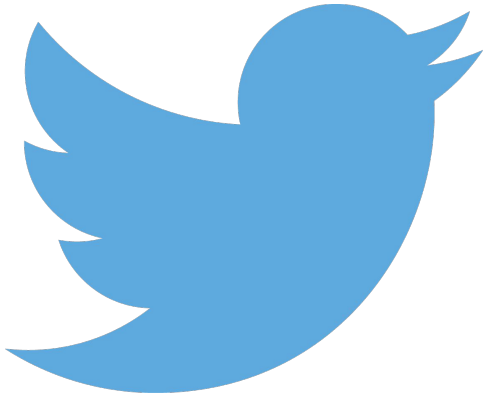
Greenland
Iceland
Finland
Russia
Canada
Kazakhstan
Mongolia
North Atlantic Ocean
Algeria
Libya
Egypt
Iraq
Iran
Afghanistan
Pakistan
Saudi Arabia
Mali
Niger
Chad
Sudan
Ethiopia
Venezuela
Colombia
DRC
Tanzania
Brazil
Angola
Namibia
Madagascar
Indian Ocean
South Pacific Ocean
South Atlantic Ocean
Chile
South Africa
Australia
Papua New Guinea
Argentina

145 Kotlin User Groups

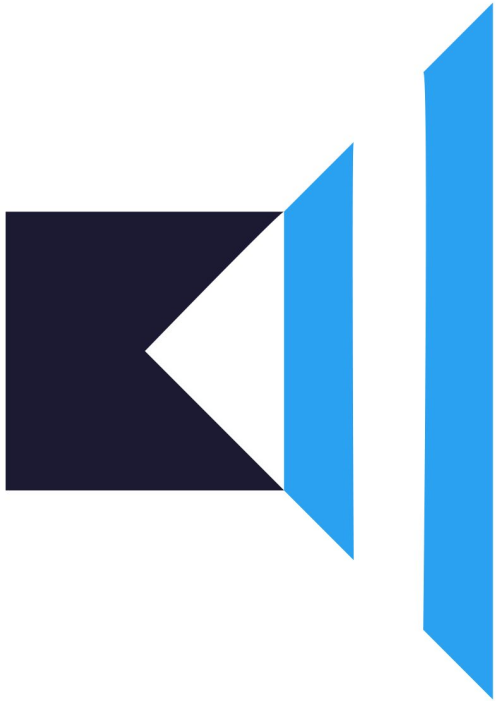
https://kotlinslack.herokuapp.com/

@kotlin_lang


THE HYPE
IS TOO DAMN HIGH
quickmeme.com



@Kotlin



Talking Kotlin

https://kotlin.link/

Вопросы?

- Awesome Kotlin: **kotlin.link**
- Twitter/Telegram: **@HeapyHop**

Компании

Pinterest
Evernote
Uber
Corda
Google

Coursera
Pivotal
Atlassian
Zalando
Juno
Qiwi

Future Kotlin

@JvmDefault: experimental in 1.2.x, released in 1.3

Type inference tweaks: experimental in 1.2.x (@NoInfer, Infer builders)

Coroutines: released in 1.3, migration from old coroutines

Contract system: partially released in 1.3

Inline classes: partially experimental in 1.3

Unsigned arithmetics: experimental in 1.3 or 1.4

Better SAM for Java methods

SAM for Kotlin! (sam interface Predicate {})
изменения в компиляторе