TOP FUNCTIONAL PROGRAMMING LANGUAGES
BASED ON SENTIMENT ANALYSIS
2021

" Functional Programming helps companies build software that is scalable, and less prone to bugs, which means that software is more reliable and future-proof. It gives developers the opportunity to write code that is clean, elegant, and powerful. Functional Programming is used in demanding industries like eCommerce or streaming services in companies such as Zalando, Netflix, or Airbnb. Developers that work with Functional Programming languages are among the highest paid in the business.

I personally fell in love with Functional Programming in Scala, and that's why Scalac was born. I wanted to encourage both companies, and developers to expect more from their applications, and Scala was the perfect answer, especially for Big Data, Blockchain, and FinTech solutions.

I'm glad that my marketing and tech team picked this topic, to prepare the report that is focused on sentiment - because that is what really drives people. All of us want to build effective applications that will help businesses succeed - but still... We want to have some fun along the way, and I believe that the Functional Programming paradigm gives developers exactly that - fun, and a chance to clearly express themselves solving complex challenges in an elegant code.

LUKASZ KUCZERA, CEO AT SCALAC

Table of contents

⌂ Key Takeaways & Comments

⋗ A Few Words About Each Programming Language

Introduction

Functional programming has been around for a while now, but so far it has never gone truly mainstream. Although game-changers like Google rely on its vital concepts, today's average developer knows little about it.

That's all about to change. Because not only languages like Java or Python are adopting more and more concepts from functional programming. A new wave of purely functional languages such as Haskell, Idris or Unison are pushing the boundaries of what can be achieved with this programming paradigm.

This is one of the reasons why we decided to investigate TOP Functional languages. The fact that they're enormously growing in popularity as a group is one thing. But finding out which one will win the hearts of developers is another.

When it comes to programming, the rule "it doesn't matter what they say about you, all that matters is that they just keep talking" doesn't really apply. Learning a language that everybody hates and choosing it for your team is a deal-breaker. So let's see which of them are hot and which are not.

Can't wait to see the outcomes?

Jump straight to the ranking

What Is Functional Programming?

In simple terms, <u>functional programming</u> is **all about building programs from pure functions.** In contrast, object-oriented programming is about building programs from objects that have a mutable state and behavior.

Because of its nature, functional programming is excellent for in-demand tasks such as data analysis and machine learning. This doesn't mean that you should say goodbye to object-oriented programming and go completely functional instead. However, you should know about the basic principles, so you can use them to your advantage when appropriate.

Big Data and the WHY behind the idea of functional programming.

In comparison to object-oriented programming, functional programming is still a niche, but if functional programming principles in Python and other languages are of any significance, functional programming seems to be gaining traction.

This makes perfect sense: functional programming is great for parallel and concurrent programming, data transformation, machine learning and generally breaking complex problems into easy to comprehend parts. And all these things have been booming over the last decade.
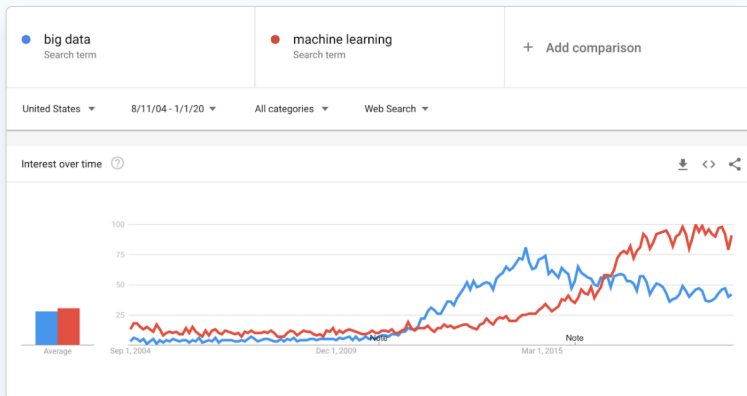
While object-oriented code has uncountable virtues, those of functional code, therefore, shouldn't be neglected. Learning some basic principles can often be enough to up your game as a developer or make your business ready for the future that will only be more data stacked than ever.

Functional Programming Languages Ranking

We've collected data on 12 languages - **Kotlin, Scala, Clojure, Erlang, Swift, Elixir, Haskell, Rust, OCaml, Elm, PureScript, and Idris** - from the functional programming family based on keywords, topics, hashtags, and @mentions across blogs, news sites, and social networks.

We analyzed 123084 mentions concerning these languages to find out which of the functional programming languages are loved by people, in other words, which have the most positive sentiment among all of the languages we analyzed and which have the most negative sentiment.

Specifically, we looked at the percent of positive sentiment, and negative sentiment. Using data from Brand24, we uncovered some very interesting findings, and now we want to share them with you. But first, for those who are curious about our methods and the Brand24 sentiment analysis, we prepared a short overview of the methodology.

Can't wait to see the outcomes?

Jump straight to the ranking

Methodology

Brand24 Sentiment Analysis

The General Idea

The sentiment analysis mechanism is based on the most popular achievements related to artificial intelligence - i.e., deep learning networks and embedding. In short, the texts that make up the mentions are converted into numerical sequences that are much more understandable to the algorithm than pure text strings. The second neural network was based on embeddings, which we learned to distinguish between sentiment based on several hundred thousand examples. The entire text in the found entry is analyzed.

For example - thanks to such advanced technology, the tool can distinguish between "thin footballer" and "thin TV" entries. In the first case (a footballer), negative sentiment will be determined, while in the case of a thin TV set, the sentiment will be positive.

First stage.

Dictionary analysis. In their database, Brand24 stores several thousand words related to emotions - both positive and negative. Each word has an assigned weight. In the first stage, we divide the content into sentences and analyze each of them separately in terms of the presence of these words.

Stage two.

Linguistic analysis. Implementation of language rules and the context analysis mentioned above . It is well-known that the algorithm finding the word "good" should check if the word "day" has not appeared before or after it, etc. The algorithm currently contains a lot of additional parameters, such as the distance of positive or negative words from the search subject.Only those results which the system has qualified according to these parameters are marked as positive or negative.

What are the sources of mentions? Where does the data come from?

Twitter   News Websites   Videos

Podcasts   H Blogs   Forums   Websites

What Steps We Took To Programming Languages Ranking

Choosing the languages

Most of the languages that we chose feel like natural choices. However, Kotlin, Rust and Swift might not seem lobvious. They are not traditionally considered functional languages, but we chose them because to some extent they support this programming style. In addition, as the process of data extraction is complex and prone to errors, we were not able to include F# and Reason in our results, but we hope to change this in future editions and updates.

Why Is The Ranking Based On 123084 Mentions Not 963941?

963941

123084

As we've already said, this report is based on 123084 mentions. This is the number of mentions we consider "qualified" for analytical purposes based on the filters we applied to filter the unwanted content - we will explain this later on in this paragraph. 963941 mentions were aggregated by the Brand24 tool in the period starting on November 1, 2020, till January 31, 2021. As you can see, not all of them were included in the analysis.

The platform by Brand24 is based on dictionary analysis, as mentioned above. Because of this, the gathered data included not only mentions of programming languages, but all the mentions that included the keywords in the project (each language was a separate project).

The keywords usually included one or two forms (if applicable) of the programming language name. For example "Scala" was only one separate keyword, but "PureScript" appeared in two forms "PureScript" and "Pure Script". On the keyword lvl the tool differentiates these two things.

Besides keywords, we also included "excluded keywords" where we knew straight away that the meaning of the keyword is broad. For Scala, the natural ones were for example "La Scala" and for Elm, it was "street"(A Nightmare on Elm Street) and "tree".
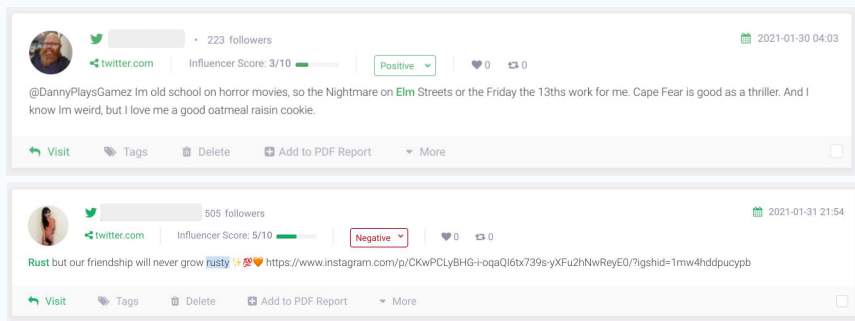
As we started to analyze all of the mentions, we quickly realized the amount of noise in our data was too big to solve with exclusions, so we decided to apply custom filters that enabled us to analyze only the content related to the IT industry.

Brand24, as a technology company, loves to support various initiatives, especially in the field of IT - and no wonder - we originated in IT ourselves. We were very pleased to be able to provide a tool to check the popularity of programming languages. An additional challenge (apart from collecting mentions, of course) is to check the sentiment, i.e. the overtone of individual languages. Sentiment testing is generally quite demanding, but the results seem very promising. Of course, I am in no position to decide how it plays out, but I have a feeling that if there are more and more negative references to a specific language - it is worth thinking twice whether to choose it, as the leading one in your solution will not generate additional problems. These types of reports are needed in the market because they can show trends. Trends which for some may be a guide to start education, learn a specific language, and for others the direction in which they will develop their product, service or application.

Mikołaj Winkiel, Chief Evangelist, Brand24

What is this "custom filter"?

An example of a custom filter looks like this:

```
Reddit {or} Opensource {or} Java {or} programm {or} functional programming {or}
programming language {or} develop {or} code {or} engineer {or} spark {or}
application {or} slick {or} tutorial {or} big data {or} bigdata {or} blockchain
{or} data engineering {or} functional {or} python {or} hello world {or} scala 3
{or} monads {or} native {or} akka {or} JVM {or} ML {or} Machine learning {or}
odersky {or} concurrent {or} Scalac {or} Lightbend {or} compiler {or} Immutability
{or} object-oriented {or} objectoriented {or} object oriented {or} syntax {or}
lambda {or} type classes {or} typeclasses {or} software {or} microservices {or}
distributed systems {or} c# {or} Erlang {or} devs {or} JSON {or} GitHub {or} Gith
hub {or} AWS {or} Cloud {or} lisp {or} FP {or} framework {or} fintech {or} backend
{or} back end {or} frontend {or} front end {or} JS {or} syntax {or} scalatest {or}
Specs2 {or} Ocaml {or} StackOverflow {or} Stack Overflow {or} bazel {or} red book
{or} SQL {or} macros {or} tuples {or} datascience {or} data science {or} Scala
lang library {or} kotlin {or} clojure {or} elixirlang {or} elixir {or} haskell
{or} python {or} swift {or} ocaml {or} purescript {or} pure script{or} idris {or}
erlang
```

As you can probably tell, the filter lets you filter the data by telling the algorithm to search for mentions that not only have the keyword included, but also at least one of the terms defined in the filter. This enabled us to get to the real "meat". Of course, this method is not 100% perfect, but it definitely gives a statistical overview of the way each language is represented on the internet.

How did we create the filters?

Every filter was based on a few factors

- **General phrases connected with every programming language**

- **Specific phrases characteristic for the language - for example libraries**

- **Other languages in the ranking**

- **Most popular hashtags associated with the language**

This was our first time creating the ranking, but we would love to continue, so if you have any suggestions when it comes to the filters or our approach - let us know.

How did we decide the positions in the functional programming languages ranking?

The percentage of mentions with **positive** sentiment

The percentage of mentions with **negative** sentiment

> scalac

Scale fast with Scalac

Future-proof Software Development Company

7

YEARS ON THE MARKET
We have been introducing excellence in Distributed Systems, Data Engineering, and Blockchain development since 2014.

90

PROJECTS SHIPPED
We work together with companies, from startups to international brands.

124

EXPERTS
Working from locations all over the world. Different time zones. One goal.

36+

TECHNOLOGIES
We have experts in over thirty-six technologies who are ready to deliver. Get the right services for your project.
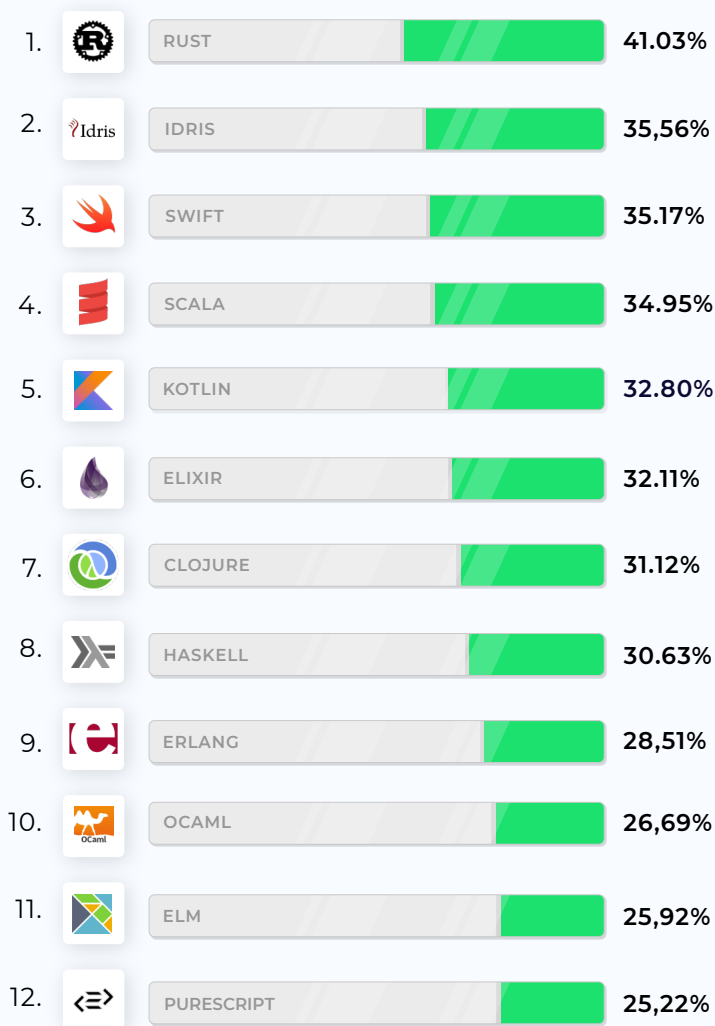
Diament Miesięcznika
Forbes
2020

TOP
IT Services
Companies
2020

CLIENTS SAY
WE DELIVER
ON
Clutch

Need Scalac for your next project?

Let's talk

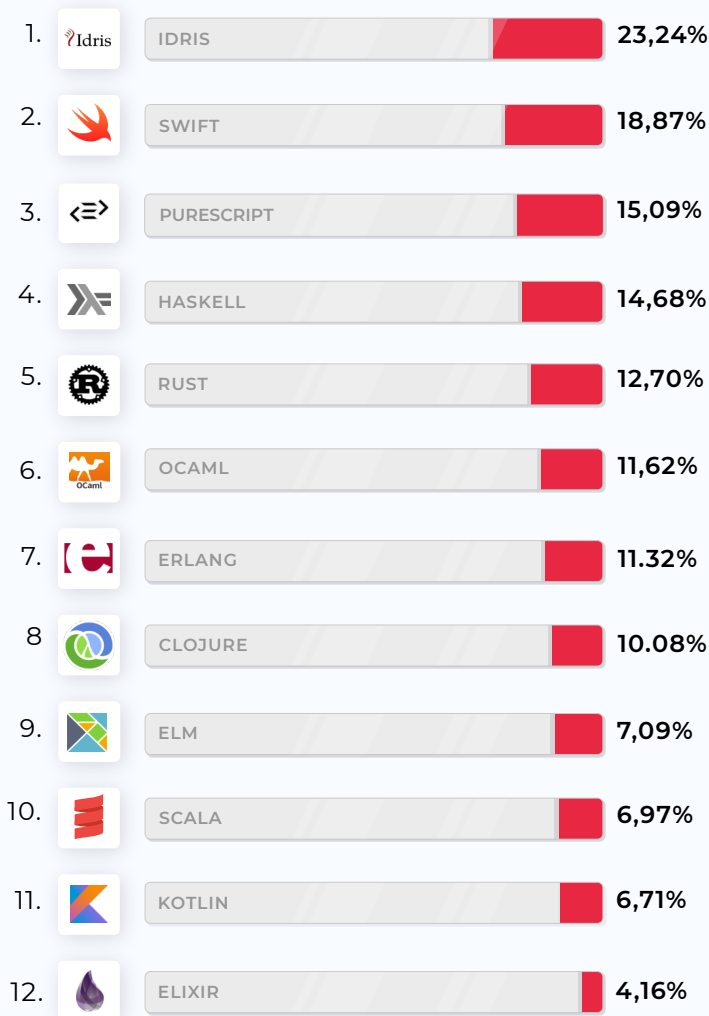# Top Functional Programming Languages Based On Sentiment Analysis 2021

Functional Programming Languages Ranking 2021

MOST POSITIVE SENTIMENT

1. RUST — **41.03%**
2. IDRIS — **35,56%**
3. SWIFT — **35.17%**
4. SCALA — **34.95%**
5. KOTLIN — **32.80%**
6. ELIXIR — **32.11%**
7. CLOJURE — **31.12%**
8. HASKELL — **30.63%**
9. ERLANG — **28,51%**
10. OCAML — **26,69%**
11. ELM — **25,92%**
12. PURESCRIPT — **25,22%**

Functional Programming Languages Ranking 2021

MOST NEGATIVE SENTIMENT

1. IDRIS — **23,24%**

2. SWIFT — **18,87%**

3. PURESCRIPT — **15,09%**

4. HASKELL — **14,68%**

5. RUST — **12,70%**

6. OCAML — **11,62%**

7. ERLANG — **11.32%**

8. CLOJURE — **10.08%**

9. ELM — **7,09%**

10. SCALA — **6,97%**

11. KOTLIN — **6,71%**

12. ELIXIR — **4,16%**

Functional Programming Languages
Sentiment Comparison

POSITIVE VS NEGATIVE

#	Positive	%		Negative	%	#
1.	RUST	41.03%		ELIXIR	4,16%	1.
2.	IDRIS	35,56%		KOTLIN	6,71%	2.
3.	SWIFT	35.17%		SCALA	6,97%	3.
4.	SCALA	34.95%		ELM	7,09%	4.
5.	KOTLIN	32.80%		CLOJURE	10.08%	5.
6.	ELIXIR	32.11%		ERLANG	11.32%	6.
7.	CLOJURE	31.12%		OCAML	11,62%	7.
8.	HASKELL	30.63%		RUST	12,70%	8.
9.	ERLANG	28,51%		HASKELL	14,68%	9.
10.	OCAML	26,69%		PURESCRIPT	15,09%	10.
11.	ELM	25,92%		SWIFT	18,87%	11.
12.	PURESCRIPT	25,22%		IDRIS	23,24%	12.

Single Language Overview

Kotlin

	32.80%	6,71%
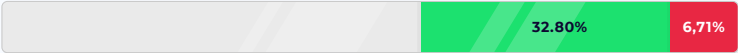
All mentions: 24043

Percentage of mentions with a **positive** sentiment: **32,80%**

Percentage of mentions with a **negative** sentiment: **6,71%**

- 12.1K followers
twitter.com | Influencer Score: 8/10 | Neutral | ♥ 0 | ↩ 0 | 📅 2021-01-31 22:58

Learn Kotlin in 12 Minutes - Would love any feedback on this high-density video covering about the core language features for a class Im teaching. https://youtu.be/iYrgWO2oibY

↩ Visit | 🏷 Tags | 🗑 Delete | ➕ Add to PDF Report | ▾ More

- 2.1K followers
twitter.com | Influencer Score: 7/10 | Positive ▾ | ♥ 2 | ↩ 0 | 📅 2021-01-31 21:37

@FadhilKiima it was just an example to show that for every field there is a different best language. For android I think it is Kotlin

🏷 Tags: pdf mentions

↩ Visit | 🏷 Tags | 🗑 Delete | ➕ Added to PDF Report | ▾ More

- 190 followers
twitter.com | Influencer Score: 3/10 | Negative ▾ | ♥ 1 | ↩ 0 | 📅 2021-01-27 11:34

Java is verbose, but with greatest tooling support. Kotlin is concise, but tooling is not that good. It is either bundled into IDE or 3party (e.g. detekt). Its questionable what hits productivity most
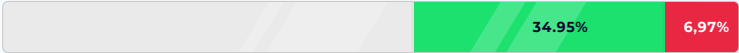
↩ Visit | 🏷 Tags | 🗑 Delete | ➕ Add to PDF Report | ▾ More

Interested in Kotlin?

Download the full PDF report

Scala

| | 34.95% | 6,97% |

All mentions: 18238

Percentage of mentions with a **positive** sentiment: **34,95%**

Percentage of mentions with a **negative** sentiment: **6,97%**

• 11.9K followers 2020-11-20 02:04
twitter.com   Influencer Score: 8/10   [Positive ▾]   ♥ 85   ⇄ 13

A ZIO native HTTPS library that is non-blocking, with an http4s-like API and 20,000 transactions-per-second. 🎉 Where did this come from?!? Amazing to see such development from the functional Scala community! ❤️ Check it out or lend a hand below! 👇 https://github.com/ollls/zio-tls-http

🏷 Tags: pdf mentions

↩ Visit   🏷 Tags   🗑 Delete   ➕ Added to PDF Report   ▾ More

• 1.4K followers 2021-01-31 17:34
twitter.com   Influencer Score: 6/10   [Negative ▾]   ♥ 0   ⇄ 0

@alexelcu The JVM (and static typings, and other aspects) come with strengths and drawbacks. Scala should play on its strengths rather than try to beat Python on its turf.

↩ Visit   🏷 Tags   🗑 Delete   ➕ Add to PDF Report   ▾ More

• 7.5K followers 2021-01-31 23:48
twitter.com   Influencer Score: 7/10   [Neutral ▾]   ♥ 0   ⇄ 0

Check out Zalando SE in Berlin Theyre looking for a Senior Scala Engineer and offering a competitive salary #berlin #kubernetes #restapis #microservices http://zpr.io/R66t3

🏷 Tags: pdf mentions

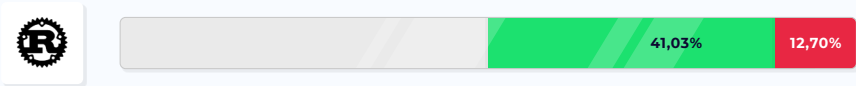↩ Visit   🏷 Tags   🗑 Delete   ➕ Added to PDF Report   ▾ More

---

Interested in Scala?

Download the full PDF report

Rust

All mentions: 23310

Percentage of mentions with a **positive** sentiment: **41,03%**

Percentage of mentions with a **negative** sentiment: **12,70%**

/g/ - /dpt/ - Daily Programming Thread - Technology - 4chan
📅 2021-01-31 15:47

🔗 boards.4channel.org   Influencer Score: 9/10 ━━━ | Negative ▾ | 📊 41.1M

79969020 and this is why **Rust** is a lost cause

🏷 Tags: pdf mentions

↩ Visit   🏷 Tags   🗑 Delete   ➕ Added to PDF Report   ▾ More

🐦 · 2.7K followers
📅 2021-01-31 23:55

🔗 twitter.com   Influencer Score: 7/10 ━━━ | Neutral ▾ | ♥ 9   🔁 0

Today is my first day at work as a **Rust** Developer. That is great! Happy to be a new member of the friendly @Impero_tech team!

🏷 Tags: pdf mentions

↩ Visit   🏷 Tags   🗑 Delete   ➕ Added to PDF Report   ▾ More

/g/ - How to be a great programmer? Not merely good, but - Technology - 4chan
📅 2021-01-31 22:12

🔗 boards.4channel.org   Influencer Score: 9/10 ━━━ | Neutral ▾ | 📊 41.1M
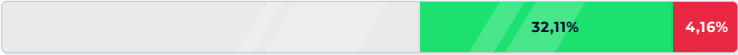
Learn **Rust**. Think **Rust**. Do it the **Rust** way.

🏷 Tags: pdf mentions

↩ Visit   🏷 Tags   🗑 Delete   ➕ Added to PDF Report   ▾ More

Interested in Rust?

Download the full PDF report

Elixir

32,11% **4,16%**

All mentions: 2002

Percentage of mentions with a **positive** sentiment: **32,11%**

Percentage of mentions with a **negative** sentiment: **4,16%**

• 138 followers   2021-01-11 06:51

twitter.com | Influencer Score: 3/10 | Negative ▾ | ♥1 ↻0

@segfaultvicta And yeah basically this kind of bullshit is why I dont like working with Elixir. Its so easy to end up with code that just fails in mysterious ways and because the programming models are both weird and super strict often you cant solve the problem without rearchitecting

🏷 Tags: pdf mentions

↩ Visit | 🏷 Tags | 🗑 Delete | ⊕ Added to PDF Report | ▾ More

• 189 followers   2021-01-22 13:01

twitter.com | Influencer Score: 3/10 | Neutral ▾

IElixir (310 ★, updated 2 months ago) Jupyter s kernel for Elixir programming language. https://github.com/pprzetacznik/IElixir

↩ Visit | 🏷 Tags | 🗑 Delete | ⊕ Add to PDF Report | ▾ More

• 24 followers   2021-01-25 20:43

twitter.com | Influencer Score: 1/10 | Positive ▾

the Elixir programming language is so cool; I wish I learned it sooner

↩ Visit | 🏷 Tags | 🗑 Delete | ⊕ Add to PDF Report | ▾ More

Interested in Elixir?

Download the full PDF report

Swift

35,17%   18,87%
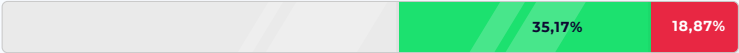
All mentions: 24444

Percentage of mentions with a **positive** sentiment: **35,17%**

Percentage of mentions with a **negative** sentiment: **18,87%**

· 486 followers

📅 2021-01-31 21:28

🔗 twitter.com   Influencer Score: 4/10 ▬   Positive ▾   ♥ 0   ↩ 0

Listening to @coreint made me realize just how much more I enjoy Mac programming with **Swift** and my own frameworks.

🏷 Tags: pdf mentions

↩ Visit   🏷 Tags   🗑 Delete   ➕ Added to PDF Report   ▾ More

· 741 followers

📅 2021-01-26 14:35

🔗 twitter.com   Influencer Score: 5/10 ▬   Negative ▾   ♥ 0   ↩ 0

Maybe because of my experience with Flutter but I hate **Swift** Storyboard... SwiftUI is dope...

🏷 Tags: pdf mentions

↩ Visit   🏷 Tags   🗑 Delete   ➕ Added to PDF Report   ▾ More

· 1.1K followers

📅 2020-11-01 17:11

🔗 twitter.com   Influencer Score: 6/10 ▬   Neutral ▾   ♥ 0   ↩ 4

Want to improve your #swiftlang code? Check out this article by Alex Lynch. https://www.toptal.com/**swift**/advanced-concurrency-in-**swift**-with-honeybee #iosdev https://t.co/T4gxl1NL24

🏷 Tags: pdf mentions

↩ Visit   🏷 Tags   🗑 Delete   ➕ Added to PDF Report   ▾ More

Interested in Swift?

Download the full PDF report

Clojure

	31.12%	10.08%
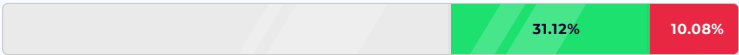
All mentions: 8099

Percentage of mentions with a **positive** sentiment: **31.12%**

Percentage of mentions with a **negative** sentiment: **10.08%**

· 8K followers

🔗 twitter.com   Influencer Score: 7/10 ▬▬▬   Neutral ▾   ♥ 0   🔁 0

📅 2021-01-31 13:40

Had a feeling Clubhouse was built using Scala... Turns out it s **Clojure**. Close enough.

🏷 Tags: pdf mentions

↩ Visit   🏷 Tags   🗑 Delete   ➕ Added to PDF Report   ▾ More

Why I still Lisp (and you should too!) - Anurag Mendhekar - Medium

📅 2021-01-30 12:22

🔗 mendhekar.medium.com   Negative ▾

It's also the reason I have not become a fan of **Clojure**.So that's reason number one [...] It might be the big reason I adopt **Clojure** in the future, but that remains to be seen.It has, of course, not deterred me yet

🏷 Tags: pdf mentions

↩ Visit   🏷 Tags   🗑 Delete   ➕ Added to PDF Report   ▾ More

· 4.9K followers

🔗 twitter.com   Influencer Score: 7/10 ▬▬▬   Positive ▾   ♥ 2   🔁 0

📅 2021-01-31 23:35

For example, I *love* **Clojure**. I think its a beautiful and pragmatic language. My dream is that all JS devs switch. But while clj is great, Id end up spending an afternoon (or week) building a library I could just npm install in Node At some point
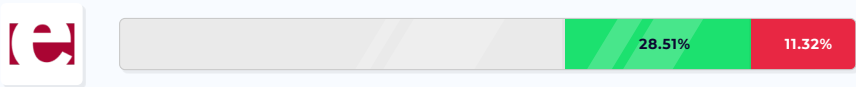
🏷 Tags: pdf mentions

↩ Visit   🏷 Tags   🗑 Delete   ➕ Added to PDF Report   ▾ More

Interested in Clojure?

Download the full PDF report

Erlang

	28.51%	11.32%

All mentions: 3887

Percentage of mentions with a **positive** sentiment: **28,51%**

Percentage of mentions with a **negative** sentiment: **11.32%**

· 8 followers
twitter.com   Influencer Score: 1/10 ●   Positive ▾   ♥ 0   ⇄ 0   📅 2020-11-29 00:07

@leostera Im JS dev but I LOVE **ERLANG**, from the bottom of my 3

↩ Visit   🏷 Tags   🗑 Delete   ➕ Add to PDF Report   ▾ More

· 3.2K followers
twitter.com   Influencer Score: 7/10 ▬▬   Negative ▾   ♥ 1   ⇄ 0   📅 2021-01-28 05:44

@__Jonathanks @madu_victor if you want a headache, try **erlang**. ;)

↩ Visit   🏷 Tags   🗑 Delete   ➕ Add to PDF Report   ▾ More

Junior Erlang Developer - Cisco Jobs
jobs.cisco.com   Influencer Score: 9/10 ▬▬▬   Neutral ▾   📊 24.5M   📅 2021-01-07 05:45
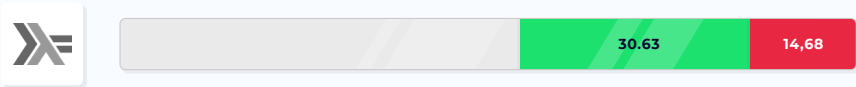
for Junior **Erlang** Developer job with **Cisco** in Stockholm, Sweden. Read about the role and find out if its right for

↩ Visit   🏷 Tags   🗑 Delete   ➕ Add to PDF Report   ▾ More

Interested in Erlang?

Download the full PDF report

Haskell

| | 30.63 | 14,68 |

All mentions: 13075

Percentage of mentions with a **positive** sentiment: **30.63%**

Percentage of mentions with a **negative** sentiment: **14,68%**

/g/ - /dpt/ - Daily Programming Thread - Technology - 4chan
📅 2021-01-20 21:00

🔗 boards.4channel.org | Influencer Score: 9/10 ▬▬ | Neutral ▾ | 📊 37.9M

79801320 which makes **Haskell** dynamic haha I love **Haskell**

🏷 Tags: pdf mentions

↩ Visit | 🏷 Tags | 🗑 Delete | ➕ Added to PDF Report | ▾ More ☐

🐦 ▬▬▬ · 275 followers
📅 2020-12-29 12:47

🔗 twitter.com | Influencer Score: 3/10 ▬▬ | Negative ▾ | ♥ 1 | 💬 0

@hhariri Because every browser and 1/4 if the servers run javascript and almost no one uses **Haskell** for anything? Ps I love **Haskell**, its a great language, but it shouldnt ber anyones first language

🏷 Tags: pdf mentions

↩ Visit | 🏷 Tags | 🗑 Delete | ➕ Added to PDF Report | ▾ More ☐

🐦 ▬▬▬ · 1.8K followers
📅 2021-01-17 04:38

🔗 twitter.com | Influencer Score: 6/10 ▬▬ | Positive ▾ | ♥ 0 | 💬 0

If you've tried **Haskell** and didn't have a nice journey, what happened? And if you'd like to comment at what point did things go wrong 😄 I love **Haskell** and would love to help improve adoption, but fear it might be blind siding me and others!

🏷 Tags: pdf mentions

↩ Visit | 🏷 Tags | 🗑 Delete | ➕ Added to PDF Report | ▾ More ☐

Interested in Haskell?

Download the full PDF report

Idris

| | 41,03% | 12,70% |

All mentions: 1476

Percentage of mentions with a **positive** sentiment: **35,56%**
Percentage of mentions with a **negative** sentiment: **23,24%**

Announcing Dactylobiotus: The Developer Preview Release of Juvix   📅 2021-01-30 15:25

🔗 research.metastate.dev   Neutral ▾

About Juvix and the Dactylobiotus releaseJuvix has been designed by Metastate and takes inspiration from **Idris**, F* and Agda [4], which are dependently typed languages (see this article for a gentle introduction on dependent type programming languages)

🏷 Tags: pdf mentions

↩ Visit   🏷 Tags   🗑 Delete   ➕ Added to PDF Report   ▾ More ☐

🐦   • 122 followers   📅 2020-12-21 04:20

🔗 twitter.com   Influencer Score: 3/10 ▬   Positive ▾   ♥ 0   🔁 0

@fasterthanlime No haskell! Only **Idris**!

🏷 Tags: pdf mentions

↩ Visit   🏷 Tags   🗑 Delete   ➕ Added to PDF Report   ▾ More ☐

/g/ - /bpg/ - The Beginner Programmer's General, #13 - Technology - 4chan   📅 2021-01-01 01:19

🔗 boards.4channel.org   Influencer Score: 9/10 ▬▬   Negative ▾   📊 37.9M

79473190 wtf is **Idris** I'm not coding some useless fucking language

🏷 Tags: pdf mentions

↩ Visit   🏷 Tags   🗑 Delete   ➕ Added to PDF Report   ▾ More ☐

Interested in Idris?

Download the full PDF report

OCaml
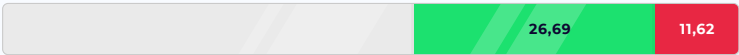
All mentions: 2555

Percentage of mentions with a **positive** sentiment: **26,69%**

Percentage of mentions with a **negative** sentiment: **11,62%**

· 815 followers
twitter.com   Influencer Score: 5/10   Neutral   ♥ 0   ↻ 0   📅 2021-01-29 14:32

@CaramelLang Why do you built it in OCaml?

↩ Visit   🏷 Tags   🗑 Delete   ➕ Add to PDF Report   ▾ More

· 973 followers
twitter.com   Influencer Score: 5/10   Negative   ♥ 6   ↻ 1   📅 2021-01-06 12:52

Yup. Some idiot engineering manager way back when decided it'd be neat for us to use ocaml. Guess who wants to come work for a random startup with a codebase in ocaml. No one. 🙋
https://twitter.com/visionandsales/status/1346999846936657923

🏷 Tags: pdf mentions

↩ Visit   🏷 Tags   🗑 Delete   ➕ Added to PDF Report   ▾ More

· 1.1K followers
twitter.com   Influencer Score: 6/10   Positive   ♥ 2   ↻ 0   📅 2021-01-28 14:05

@benfulton @justincormack @noahsussman Ocaml would have been perfect. Still is. Haskell also an option. Now there's https://www.usenix.org.uk/content/please.html in rust

🏷 Tags: pdf mentions

↩ Visit   🏷 Tags   🗑 Delete   ➕ Added to PDF Report   ▾ More

Interested in OCaml?

Download the full PDF report

Elm

| | 25,92 | 7,09 |
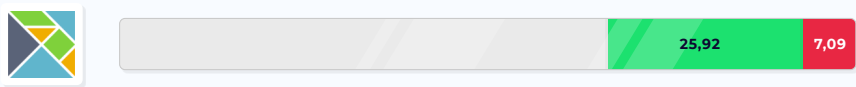
All mentions: 1030

Percentage of mentions with a **positive** sentiment: **25,92%**

Percentage of mentions with a **negative** sentiment: **7,09%**

· 312 followers
twitter.com · Influencer Score: 4/10 ▬▬ | Positive ▼ | ♥ 0 ↺ 0 | 📅 2021-01-31 18:19

@berislavbabic I am learning **Elm**, my opinion is that is great JavaScript alternative

🏷 Tags: pdf mentions

↩ Visit | 🏷 Tags | 🗑 Delete | ➕ Added to PDF Report | ▾ More

· 829 followers
twitter.com · Influencer Score: 5/10 ▬▬ | Negative ▼ | ♥ 0 ↺ 0 | 📅 2021-01-25 18:59

@jlouis666 Oh oops, I didnt notice that the second one isnt PureScript. I would stay away from **Elm**, from first hand experience. In @serokell we rarely forbid usage of a technolgoy, but we have a no **elm** and no java policy.

🏷 Tags: pdf mentions

↩ Visit | 🏷 Tags | 🗑 Delete | ➕ Added to PDF Report | ▾ More

· 605 followers
twitter.com · Influencer Score: 5/10 ▬▬ | Neutral ▼ | ♥ 12 ↺ 0 | 📅 2021-01-31 00:33

Someone needs **Elm** developer ? 😂😂😂 https://t.co/9Glo89F4gz

🏷 Tags: pdf mentions

↩ Visit | 🏷 Tags | 🗑 Delete | ➕ Added to PDF Report | ▾ More

Interested in Elm?

Download the full PDF report

PureScript

| | | 25,22 | 15,09 |
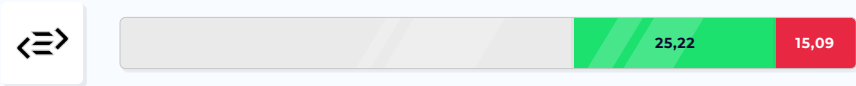
All mentions: 925

Percentage of mentions with a **positive** sentiment: **25,22%**

Percentage of mentions with a **negative** sentiment: **15,09%**

🐦 ・ 1.4K followers   🗓 2021-01-29 00:09

◀ twitter.com   Influencer Score: 6/10 ▬   [Neutral ▾]   ♥ 1   🔁 0

@ablecoder yeah, it wont. this is the most **purescript** ive written in over a year. but once ive actually instructed it correctly, the logic will be correct. or ill cry.

🏷 Tags: pdf mentions

↩ Visit   🏷 Tags   🗑 Delete   ➕ Added to PDF Report   ▾ More ☐

🐦 ・ 166 followers   🗓 2020-12-27 07:06

◀ twitter.com   Influencer Score: 3/10 ▬   [Negative ▾]   ♥ 0   🔁 0

@dysinger @fresheyeball **Purescript** lacks a runtime and is very Haskell like. (But it's not Haskell)

🏷 Tags: pdf mentions

↩ Visit   🏷 Tags   🗑 Delete   ➕ Added to PDF Report   ▾ More ☐

I feel like being Anti-Haskell is becoming a ridiculous meme ...   🗓 2021-01-09 03:33

◀ news.ycombinator.com   Influencer Score: 9/10 ▬   [Positive ▾]   📊 10.9M

even most haskellers would agree that **purescript** is a better choice compared to GHCJS. [Haskellers are] using some obscure definition from

🏷 Tags: pdf mentions

↩ Visit   🏷 Tags   🗑 Delete   ➕ Added to PDF Report   ▾ More ☐

Interested in PureScript?

Download the full PDF report

Key Takeaways & Comments

The language with the highest amount of mentions - so the one that's on everybody's tongue **is Swift with 24444 mentions.**

The most positive sentiment on the web, so the language that seems to be loved by many is **Rust with over 40% of positive mentions.**

The least positive programming language with the least positive sentiment is **PureScript with only a little over 25%** of positive mentions, however, the language with the greatest amount of negative sentiment is **Idris with over 23% of negative mentions.**

The language with the lowest amount of mentions, so the one that probably wouldn't be a prom king at high school is **PureScript with 925 mentions.**

" *These results confirm what I already knew: that **Scala** developers love **Scala**, as much as **Rust** or **Swift** developers love their programming languages. In the **Scala** community, we are fortunate to have a passionate community of developers who, when they do criticize, tend to do so thoughtfully and constructively, focused on helping the language and community become everything we know it can be. In my mind, this analysis paints a beautiful and thought-provoking picture of the future of the **Scala** programming language.*

John De Goes, CEO at Ziverge, ZIO creator

We didn't really know what to expect when we came up with the idea of a sentiment based languages ranking in Scalac. Now seeing the results I can say there are both surprises and things that are consistent with other independent observations.

The outcome for Rust is just a confirmation of what we're hearing in the programming community. *Everyone loves Rust. The relatively large number of negatives could be connected to the fact that Rust has introduced many new concepts and could be regarded as difficult for programmers to get productive with.*

Haskell is definitely a surprise for me. Especially compared to Scala. *I've been following Twitter for the past couple of years and there was this "Scala is bad/Haskell is awesome" vibe visible in parts of the community (although totally subjective observation). So as a Scala developer I feel reassured seeing Scala scoring so well both in positive and in negative sentiment compared to Haskell*

*The case of **Idris** and **Swift** seem to be bordering on an error. Unless their communities are really so critical. We'll be monitoring these results in future editions.*

*All in all, this sentiment based ranking is an interesting supplement to the Redmonk and TIOBE rankings that both measure popularity of the language. I'm really curious about what will happen in the future, how the sentiment will change with the development of languages in time and expand the list with a couple more entries. Especially on the frontend side - **ReScript** is at the top of my list.*

Jakub Czuchnowski, CTO at Scalac

"

In general, this ranking confirms what we (VirtusLab) are seeing on the market, especially regarding the most popular languages. We should still take this analysis with a grain of salt. The programming world, as seen through blogs, podcasts, and Twitter, can differ significantly from the industry as a whole.

In short, I definitely think that when we look for the next 1-3 years, we will see a significant rise in **Scala**, **Swift***, and (less so)* **Rust.**

Even though there might have been a slight decline in **Scala** *adoption in recent years, I still believe that Scala's best days are yet ahead. I think two factors come into play:*
* release of Scala 3 which is just around the corner, which will significantly streamline the language (Q2 2021)
* focus on improvements and simplifications in tooling in Scala ecosystem

Both of these are the areas in which VirtusLab has already made a significant investment and is planning to do consistently more.

Swift *is a great multi-paradigm programming language with some functional concepts (which modern language doesn't have them?). It is strongly backed by Apple (and IBM and many others) and was historically used for iOS devices. In the last few years, Swift also proved to be well suited for general server-side programming and it's making waves even in the data science field. I'd bet there is still plenty of space for growth here.*

Last but not least - **Rust** *is going to grow as a replacement for a low-level programming language (like C or C++). However, I anticipate some slow down in its adoption in the next few years, primarily due to its steep learning curve. Some of its core concepts are rather obscure for many programmers, e.g. borrow checker or type classes. This is in stark contrast to, e.g. Swift or Scala or Kotlin, which allow easy entry into the language (even if they all have more advanced concepts).*

Do I expect massive adoption of purely functional languages such as Idris, Haskell, or Elixir? Definitely not. I'd rather bet on a reign of general languages like Java, Python, or JS / Typescript with a bigger skew toward functional concepts in them together with multi-paradigm languages like Scala or Swift. Last but not least, C is still going to be strong and Rust won't take a significant part of the segment for a long time (if ever).

Pawel Dolega, CTO at VirtusLab

A Few Words About Each Programming Language If You're Not Familiar With Any Of Them

Scala

Scala, which is short for Scalable Language and first appeared in 2004, is a programming language invented by Martin Odersky. Scala is compiled to Java bytecode and executed using a Java virtual machine (JVM).

Scala has become one of the most popular multi-purpose programming languages in use today. Many companies use it to build their software infrastructure, whether with consumer products or their in-house tech stacks. Its mix of flexibility, concision, and Java compatibility has made Scala particularly popular among businesses that rely on distributed architecture and require easily-scalable apps.

Kotlin

Kotlin is an open-source, statically typed "pragmatic" programming language initially designed for JVM (Java Virtual Machine) and Android, which combines object-oriented and functional programming features. It is focused on interoperability, safety, clarity, and tooling support.

Erlang

Erlang is an open-source language and runtime environment. Erlang has built-in support for concurrency, distribution, and fault tolerance. Erlang is used in several large telecommunication systems from Ericsson.

Clojure

Clojure is a dynamic programming language, combining the approachability and interactive development of a scripting language with an efficient and robust infrastructure for multithreaded programming. Clojure is a compiled language yet remains completely dynamic – every feature supported by Clojure is supported at runtime. Clojure provides easy access to the Java frameworks, with optional type hints and type inference, ensuring that calls to Java can avoid reflection.

Swift

Swift is a modern, general-purpose, and multi-paradigm programming language designed by Apple to build its iOS-powered devices and following ecosystems. Apps can be designed to run also on macOS (for Apple computers), watchOS (Apple Watch), tvOS (Apple TV digital media player), and - what may be a bit surprising - z/OS, which powers IBM Mainframe computers.

The language is currently distributed on Apache License, which makes it available for the community to use. It's a relatively new project, launched in June 2014, seven years after the first iPhone launch.

Idris

Idris is a purely-functional programming language with dependent types, optional lazy evaluation, and features such as a totality checker. Idris may be used as a proof assistant, but it is designed to be a general-purpose programming language similar to Haskell.

PureScript

PureScript is a strongly-typed, purely-functional programming language that compiles to JavaScript. It can be used to develop web applications, server-side apps, and also desktop applications with the use of Electron. Its syntax is mostly comparable to that of Haskell. In addition, it introduces row polymorphism and extensible records. Contrary to Haskell, PureScript also adheres to a strict evaluation strategy.

Elm

Elm is a domain-specific programming language for declaratively creating web browser-based graphical user interfaces. Elm is purely functional and has been developed with an emphasis on usability, performance, and robustness. Elm is a functional language that compiles to JavaScript — think of it as a competitor to React or Vue, and is used to create websites and web apps. Elm promises no run time exceptions — no null and no-undefined is not a function. It uses type inference to detect corner cases and help the user with what the issue might be. One of the most significant features is that Elm also comes built with a robust type system and a compiler to help you during development. No need for TypeScript — these are actual types that the code must adhere to.

OCaml

OCaml, formerly Objective Caml, is a multi-paradigm programming language that extends the Caml dialect of ML with object-oriented features. OCaml was created in 1996. The OCaml language was initially used to develop applications that involve symbolic computation: automatic theorem provers, compilers, and interpreters, program analyzers, etc. It is now used to build software in many other application areas. OCaml is also pretty simple, which is one reason it's often used as a teaching language.

Elixir

Elixir is a functional, concurrent, general-purpose programming language that runs on the BEAM virtual machine used to implement the Erlang programming language. Elixir builds on top of Erlang and shares the same abstractions for building distributed, fault-tolerant applications.

Haskell

Haskell is a statically typed, purely functional programming language with type inference and lazy evaluation. Developed to be suitable for teaching, research, and industrial application, Haskell has pioneered many advanced programming language features such as type classes, which enable type-safe operator overloading. Haskell's primary implementation is the Glasgow Haskell Compiler (GHC).

Rust

Rust is a relatively new programming language that was designed by Graydon Hoare and is sponsored by Mozilla. The first stable version (Rust 1.0) was released in 2015. It was voted "the most loved language" in a survey of developers on Stack Overflow in 2019. Though it has a similar syntax to C++, many experts have argued that it is unlikely to replace it in the near future. That said, use among developers is growing.

"

As this is the first ranking based on sentiment analysis that I know of and the first one that I have put together while working at Scalac, I want to share a few words about the experience of building it from scratch and future plans.

With every great project comes a great team. And this time was no different. The idea of the ranking sprouted in our Marketing Team but our CTO and Data team helped us to decide on the concept of sentiment analysis-based ranking.

If there's something I know about developers, it is that the "which language is better" fight is almost as old as that between good and evil. So, I gladly took up the challenge of putting this report together.

I won't say it was easy - all of the Taylor Swift mentions that came up before I had excluded it from the Swift project will haunt me forever. (Yes, I did all of that so YOU wouldn't have to). Fortunately, I had a reliable companion - Katarzyna Fryc - from Brand24 by my side.

I've learned so much from the whole experience during this couple of months of gathering data, filtering it, describing it, visualizing it... that I just can't wait to do it all again!

We plan to post updates of the ranking - we already have a bunch of new ideas on adding languages, comparisons, and much more. We also want to explore the topic of libraries - I know you're as curious as I am to find out if the libraries that seem to be so loved - really are. Scala libraries ranking coming soon, so stay tuned!

Keep your fingers crossed for the ranking future, and don't hesitate to share your ideas.

Daria Karasek, Ranking Creator & Marketing Specialist at Scalac

> scalac

★★★★★

5/5 Average Clutch Rating

★★★★★

They were able to quickly become acquainted with highly complex requirements and always delivered on time.

RAMI AKKAD
TECHNOLOGY STRATEGY COO, SAP

★★★★★

We appreciate their flexibility and ability to handle work independently if needed.

BENNO KITTELMANN
SOFTWARE ENGINEER, ELEMICA

★★★★★

The platform we built with Scalac, Inc. was absolutely transformative for our company.

VISHAKH VISHAKH
CTO, CRYPTONOMIC

★★★★★

The team was also highly knowledgeable in the technology stack that they used.

PAWEL CEJROWSKI
SENIOR SOFTWARE ENGINEER, TAPAD

See more on Clutch