

# **MythBuster**

Ruby Association

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#### There are "kind" people in the Internet



#### Too many



Ruby is too good to be a scripting language



Scripting languages do not need OOP





No one use Ruby
They use Perl/PHP/Python



There's no killer app in Ruby



You shouldn't have created Ruby We should focus on Perl



Kuby is slow





Web age is over AI / ML / Web3!



Kuby is dead



Kuby is dead every year



Ruby is not Rust/Zig/Go/Python



#### They irritate me



#### Not because they insult Ruby



#### But because they are not fair

# 虎の威を借る狐 A fox that borrows the authority of a tiger



Being majority does not make them superior



#### Seek the Reality



## MythBusters



#### MYTH.1



#### **Ruby is Dead**



#### FACT.1



#### No



#### Still Many People Use Ruby



#### For Productivity



#### For Community



#### For Joy



## For Money







Name		Exchange	HQ	Market Cap	
# 1	<u>@</u>	Airbnb eirbnb.com	MASORO ADINB	San Francisco, CA	\$60.2 B
#2	ß	Shopify shopify.com	MASE SHOP	Ottawa, ON	\$39.4 B
#3	•	Square block.ryz	MMS# SQ	San Francisco, CA	\$38.3 B
#4	•	Colinbase colinbase.com	MASSIAQ COIN	Wilmington, DE	\$11.9 B
#5	72	Zendesk zendesk.com	MASS ZEN	San Francisco, CA	\$9.16 B



		•	doximity.com			ψο.ο- υ
	#7	•	GitLab about.gitlab.com	HASDMO GTLB	San Francisco, CA	\$8.32 B
	#8	c	Procore Technologies procore.com	MYSE PCOR	Carpinteria, CA	\$6.15 B
	#9	R	On Running on-running.com	MASS ONOM	Zurich, Switzerland	\$5.52 B
	#10	COL	Coupa Software	HASSING COUP	San Mateo, CA	\$4.55 B
	#11	".	monday.com monday.com	HASDAG MNDY	Tel Aviv, Israel	\$4.16 B
	#12	Ф	Braze braze.com	HASDWO BRZE	New York, NY	\$4.12 B



Charlie Reese ≅ зивосния

BY CHARLE REESE - SEP 13, 2020

ABOUT ME

#### Y Combinator - Top 50 Software Startups





#### 1. Top 50 Software Startups:

Company	Latest val (SMM)	Initial back-end language(s)	DataSci / LowLv
Stripe: Payment / economic infrastructure for internet	36,000 source	Ruby source	N/N
Cruise: Building self-driving car tech	19,000 source	C++, Python source, source	Y/N
Airbnb: Marketplace to rent someone's room	18,000 <u>source</u>	Ruby source	N/N
DoorDash: Food delivery	16,000 source	Python source	N/N
Twitch: Gaming video platform / community	15,000 source	C++, Ruby source (founded before Go)	N/Y
Instacart: Grocery pick-up / delivery	13,700 source	Ruby source	N/N



#### 2. Aggregated Stats:

Startups with one (initial) primary back-end language:

Language	Count		Total Valuation (\$BN
All	35 (70%)	132.1 (75%)	
Ruby	13 (26%)	92.4 (52%)	
Python	11 (22%)	29.9 (17%)	
Lisp	1 (2%)	3.0 (2%)	
Elixir	1 (2%)	2.8 (2%)	
Java	2 (4%)	1.7 (1%)	
Go	3 (6%)	1.6 (1%)	
PHP	2 (4%)	0.8 (0%)	
JS	2 (4%)	0.5 (0%)	
C++	1 (2%)	0.3 (0%)	



#### We can ignore noise



# As long as we create value



# Keep moving forward



# The Best part of Ruby



# Velocity



# Not only higher productivity



### It means quick to deploy



### MYTH.2



# Static typing is newer



### FACT.2



### Static typing is older



## FORTRAN is statically typed



### MYTH.3



# Static typing is better



## FACT.3



### Static typing has trade-offs

- TypeScript
- PHP (type declaration)
- Python (type annotation)
- Ruby (?)



# (So-called) Pros

- Comprehensive Checks
- Works as Documentation
- Better IDE Support
- Better Performance



### Cons



- Verbose
  - No concise
- Redundant
  - DRY Principle
- Complex
  - Turing Complete
- Forceful Community
  - Type Police



#### 2010s and 2020s



# Static Typing is a cool kid



#### 1990s and 2000s



## Dynamic Typed languages were cool



Ruby / PHP / Python / JavaScipt



## Popularity comes and goes



### We should not dangle in the wind



# Do we really need type declaration?



### Despite those cons?



# Static Type Checking is Good



#### We Don't Need Declarations to Check



# **Ruby3 Static Typing**



### Type Information in Signature Files



#### rbs

J

ruby/gem\_rbs\_collection

DefinitlyTyped counterpart

J

# pocke/rbs\_rails

Signatures for Ruby on Rails

# typeprof

Signature Generator

#### steep

Signature based type analyzer

# typeprof

Also works as LSP server



By those (and forthcoming) tools,

- Comprehensive Checks (typeprof/steep)
- Works as Documentation (LSP)
- Better IDE Support (typeprof/LSP)



# We can get the benefit of static typing



#### Without Declarations



# Far long-term Aspect



## Tech Trend comes and goes



#### Like Pendulum



# 10,15,20 Years Later

# Languages without Type Declaration might become popular



#### I want Ruby to be one of those languages



## Nobody knows Future

## Trust my forecast ;-)



## MYTH.3



# Dynamic typing is slower



# FACT.3



#### V8: Chrome JS VM



#### Faster than Most VM



## Without Type Declaration



### JIT using Runtime Type Information



#### MYTH.4



# If Ruby is Faster, We Use Ruby



# FACT.3



## Liar!

When someone says: If Ruby is xxx...



#### Don't Believe them



#### But Still Performance should be Better



# Ruby3x3



#### YJIT in Rust



#### YJIT for ARM64



# MJIT in Ruby



# What's New in Ruby3.2



## Ruby on WASM



# **Memory Allocation**



#### MaNy (N:M threading)



#### What's New in 3.2



## Data objects



### syntax\_suggest



## error\_highlight



#### Tools!



#### Thanks to excellent tools



- RubyMine
- Solargraph
- Rubocop
- Sorbet / Steep
- ..



#### We can do more



If you need help, ask us!



#### We will Keep Moving Forward



### As we have always tried



#### To Create Better World



### Together



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## Thank you