Intro

November 10, 2020

1 Intro

1.1 Why *python*?

1.1.1 Roots of its fortune

- Fast to learn, extremely versatile and flexible programming language
- Very high-level and concise
  - Allows users to write their program in less time and hopefully with less bugs
- Interpreted and highly portable
  - Extensions like *Cython* exist and aim to build native code from a *Python* like language
- Often called "a glue language", it can let disparate code interoperate
  - This helps relieving the poorer performance when compared to compiled code
- Strong community
- Large number libraries and packages available
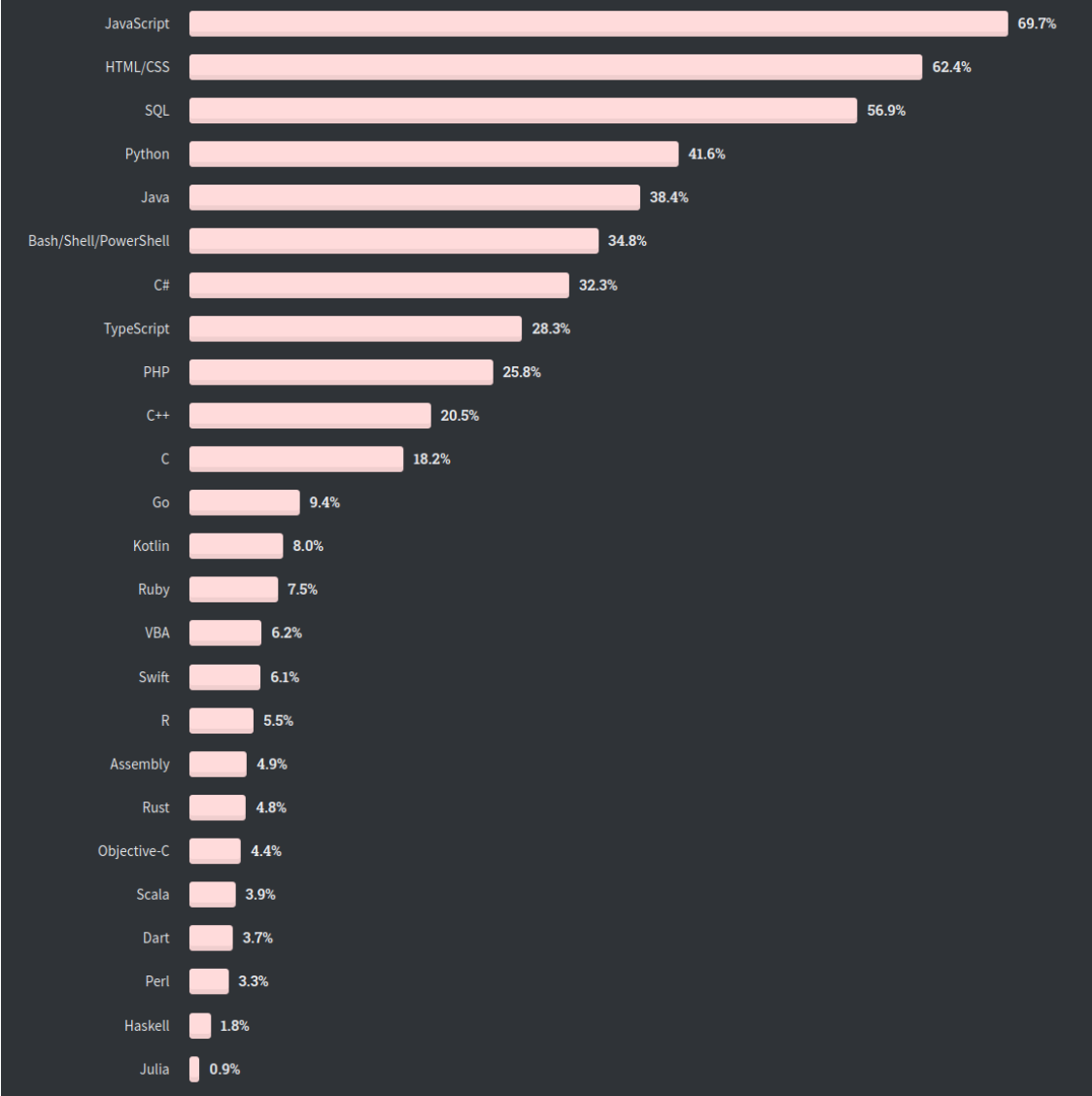
1.1.2 Applications

- Data Science
  - Loading, processing and plotting of data
- Web development (backend)
  - Django, Flask, Sanic frameworks and more
- Scientific and Numeric Applications
  - Modeling
- Artificial Intelligence and Machine Learning
- Image and Text processing
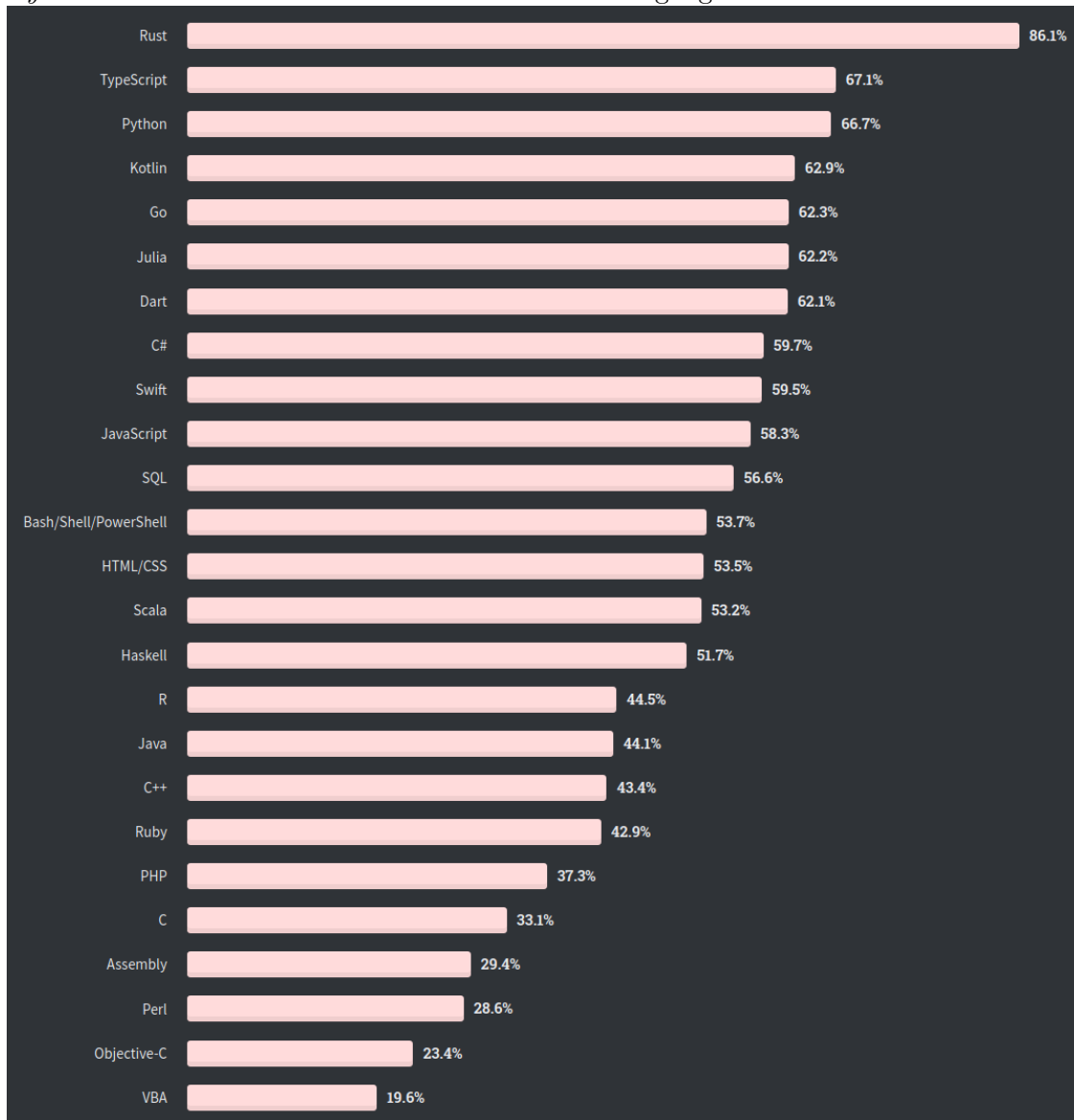- Scripting
- ...

1.2 *Python* in numbers

1.2.1 Popularity

According to *StackOverflow's* latest (2020) survey, it is the third most popular programming language after *JavaScript* ad *TypeScript*.

Language	Percentage
JavaScript	69.7%
HTML/CSS	62.4%
SQL	56.9%
Python	41.6%
Java	38.4%
Bash/Shell/PowerShell	34.8%
C#	32.3%
TypeScript	28.3%
PHP	25.8%
C++	20.5%
C	18.2%
Go	9.4%
Kotlin	8.0%
Ruby	7.5%
VBA	6.2%
Swift	6.1%
R	5.5%
Assembly	4.9%
Rust	4.8%
Objective-C	4.4%
Scala	3.9%
Dart	3.7%
Perl	3.3%
Haskell	1.8%
Julia	0.9%

1.2.2 User friendliness

Python is the third most loved language after *Rust* and *TypeScript*

Language	Percentage
Rust	86.1%
TypeScript	67.1%
Python	66.7%
Kotlin	62.9%
Go	62.3%
Julia	62.2%
Dart	62.1%
C#	59.7%
Swift	59.5%
JavaScript	58.3%
SQL	56.6%
Bash/Shell/PowerShell	53.7%
HTML/CSS	53.5%
Scala	53.2%
Haskell	51.7%
R	44.5%
Java	44.1%
C++	43.4%
Ruby	42.9%
PHP	37.3%
C	33.1%
Assembly	29.4%
Perl	28.6%
Objective-C	23.4%
VBA	19.6%

1.2.3 Salaries

The salaries for *Python* developers are in the middle of the chart ($59k/year vs *Perl* that pays $76k/year), but take these numbers with a grain of salt as it mainly depends on what your job is, since *Python* is extremely versatile.
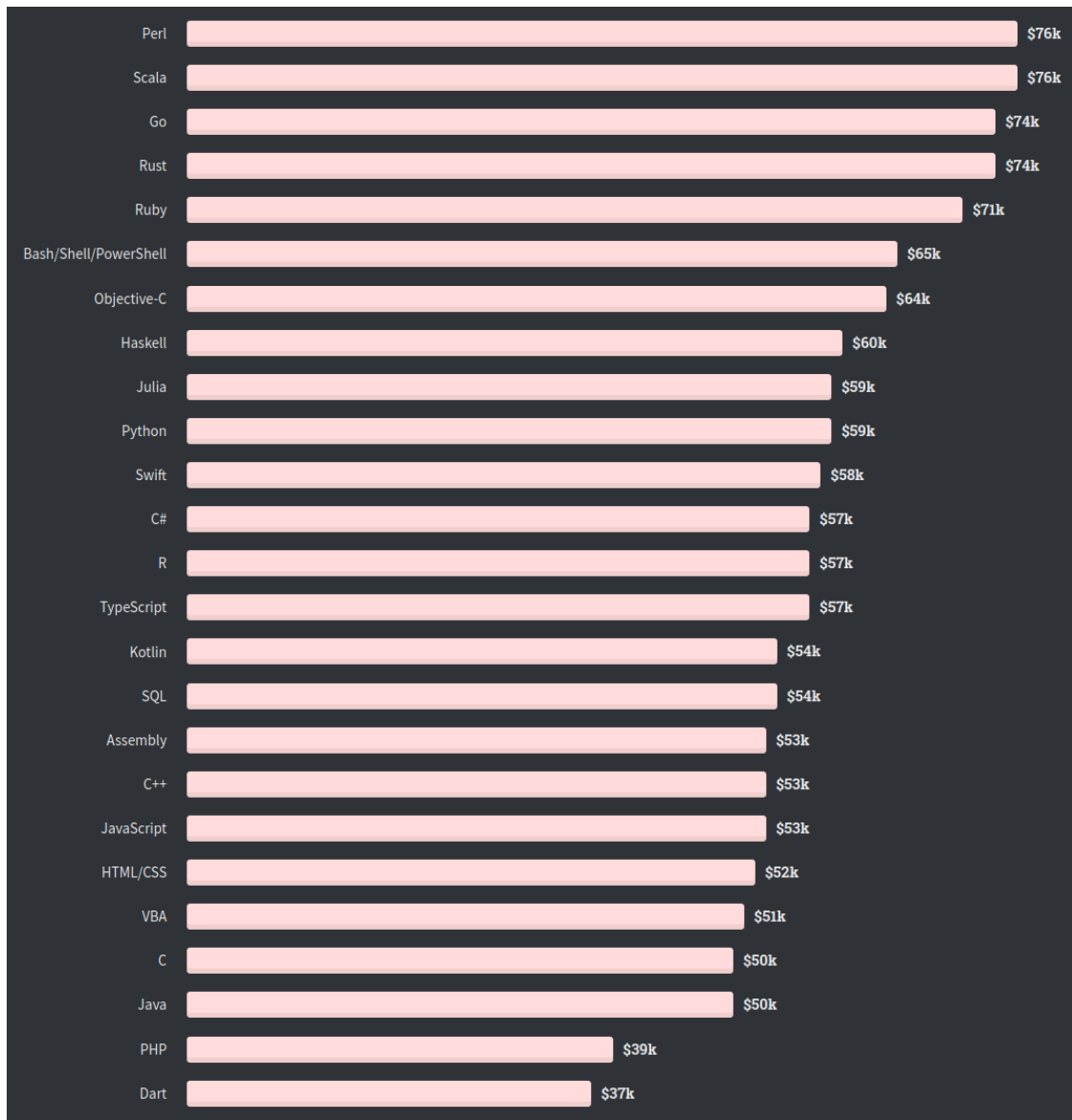
1.3 References

- StackOverflow Survey 2019