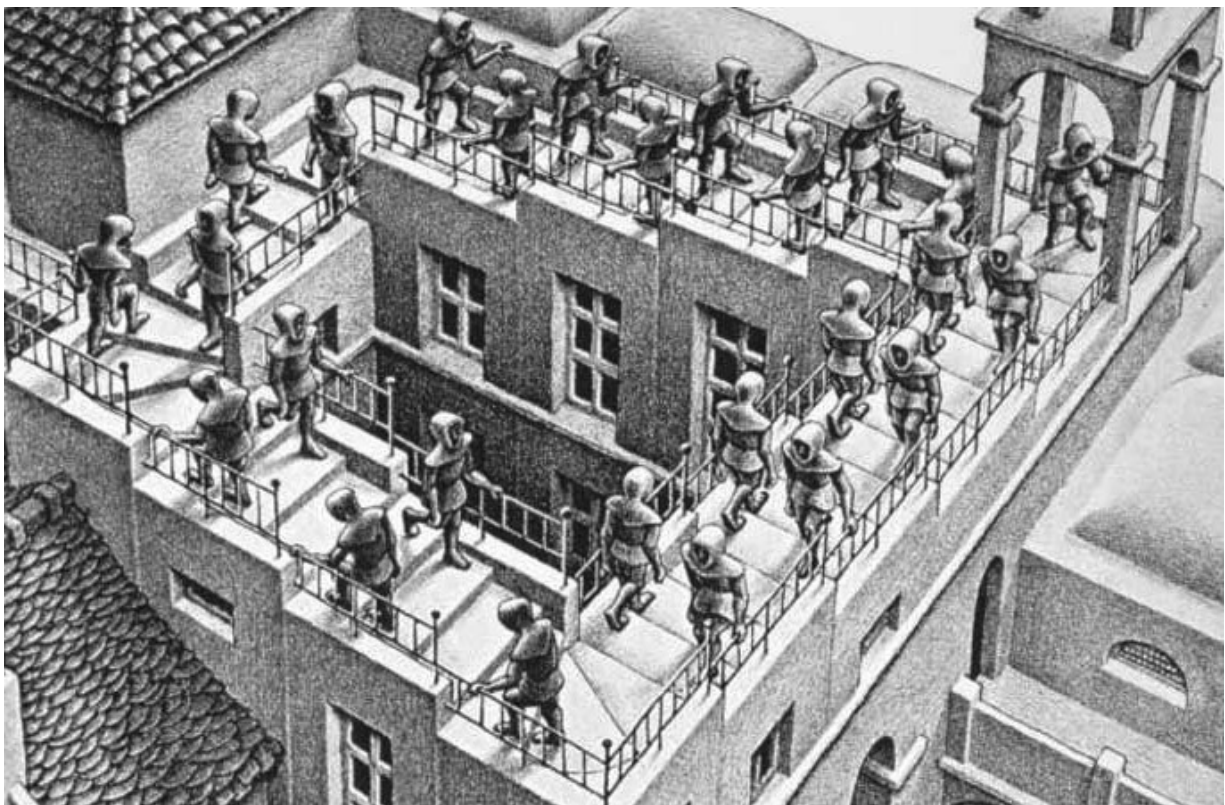


Trends or illusions ? Stack Overflow Survey Discovery



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Ascending and Descending by M. C. Escher

As a developer, you may feel some trends are happening based on your intuition or experience. But, is it a real trend or just an illusion? To answer this question, we need data to tell its story.

Since 2011, Stack Overflow conducted developer survey examining all aspects of the developer experiences around the

world. It covers career satisfaction, education and opinions on open source software, etc.

Here, I list three questions I'm interested in. In this article, I'll share my findings below. Detailed works are implemented in my Github repo. Here are my questions :

- **What are the top 5 popular languages from 2018 to 2019 ?**
- **What is the most popular version control tool in 2018 ?
What percentage does it take ?**
- **What are the top 5 popular IDEs from 2017 to 2019 ?**

You may guess the results before reading. Let's go !

. . .

What are the top 5 popular languages from 2018 to 2019 ?

When we look into data in 2018, the top 5 popular languages are :

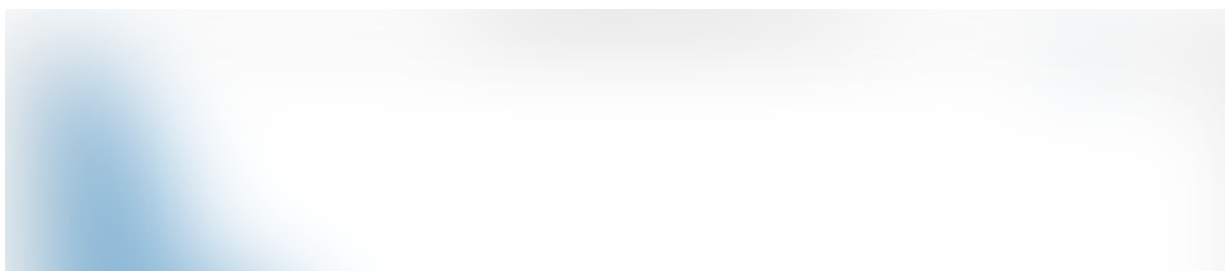
- 1. Javascript**
- 2. HTML/CSS**
- 3. SQL**
- 4. Java**


5. Shell



On the other hand, the top 5 popular languages in 2019 are :


1. Javascript
2. HTML/CSS
3. SQL
4. Python
5. Java





It's noted that the top 3 popular languages remain the same, while **Python** replacing **Shell** in 2019.

If we examine the bar chart of language worked with in 2018 and 2019, it found the top 3 popular languages remain similar fraction at about 0.11~0.13, and the fraction of 4th, 5th and 6th popular languages are at about 0.08. We can also see **Python**, **TypeScript** and **Kotlin** seems to have an obvious increase in 2019 compared to other languages.



Furthermore, we can compare the percentage difference of language worked with between 2018 and 2019.



If $\pm 0.5\%$ percentage difference is used as threshold, we can see **Python** and **TypeScript** are the most promising languages in 2019. On the other hand, **PHP** tends to be unpopular in 2019. It's not surprising that Python is one of the most promising language because most state of the art AI tools are developed based on it. But it's quite surprising for me about the growth of TypeScript and the decline of PHP.

What is the most popular version control tool in 2018 ? What percentage does it take ?

According to the data statistics in 2018, it's not surprising for developers that **Git** is the most popular version control tool.



However, it's out of my expectation that **Git** accounts for **63%** and the runner-up, **Subversion**, only accounts for **11.6%**. What a huge difference !

What are the top 5 IDEs from 2017 to 2019 ?








By examining bar charts for each year, we can see the top 5 popular IDEs from 2017 to 2019 are :



It's noted that **Visual Studio Code** grow rapidly, as we compare fractions of all top 5 popular IDEs from 2017 to 2019.





We can further compare the difference between 2017 and 2019, and it's clear that **Visual Studio Code** get more than 10% growth. It's a huge growth compared to other IDEs.



Did you guess it right ?

- The top 5 popular language in 2018 are : Javascript, HTML/CSS, SQL, Java and Shell
- The top 5 popular language in 2019 are : Javascript, HTML/CSS, SQL, Python, Java
- The most popular version control tool in 2018 is Git, and it accounts for 63%

- The top 5 popular IDEs in 2017 are : Visual Studio, Notepad++ , Sublime Text, Vim, Eclipse
- The top 5 popular IDEs in 2018 are : Visual Studio Code, Visual Studio, Notepad++ , Sublime Text, Vim
- The top 5 popular IDEs in 2019 are : Visual Studio Code, Visual Studio, Notepad++ , IntelliJ, Vim

Reference

- https://en.wikipedia.org/wiki/Ascending_and_Descending
- <https://github.com/raymonduchen/DSND-P1-Write-A-Data-Science-Blog-Post>

Data Science

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