Stack Overflow Developer Survey

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OUTLINE

- Executive Summary
- Introduction
- Methodology
- Results
  - Visualization – Charts
  - Dashboard
- Discussion
  - Findings & Implications
- Conclusion
- Appendix

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EXECUTIVE SUMMARY

- Python, the fastest-growing major programming language, has risen in the ranks of programming languages in our survey yet again, edging out Java this year and standing as the second most loved language

- Over half od our respondents had written their first line of code by the time they were sixteen, although this experience varies by country and by gender

- DevOps specialists and site reliability engineers are among the highest paid, most experienced developers most satisfied with their jobs.

- China has the developers that are the most optimistic, believing that people born today will have a better life than their parents.

- Men are more likely to say that being tasked with a non-development work is a problem for them.

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INTRODUCTION

- Stack Overflow's annual Developer Survey is the largest and most comprehensive survey of people who code around the world

- Each month, about 50 million people visit Stack Overflow to learn, share, and build their careers.

- The majority of our survey respondents this year were people who said they are professional developers or who code sometimes as part of their work, or are students preparing for such a career

- When thinking about blockers to productivity, different kinds of developers report different challenges

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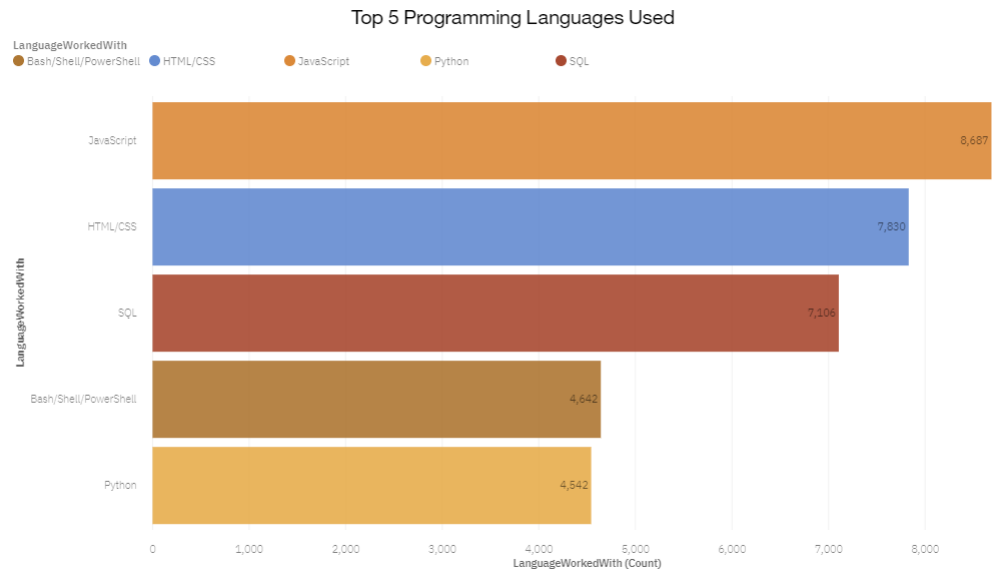
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METHODOLOGY

- This report is based on a survey of 88,883 software developers from 179 countries around the world.

- This is the number of responses we consider "qualified" for analytical purposes based on time spent on the full, completed survey

- Many questions were only shown to respondents based on their previous answers. For example, questions about jobs and work were only shown to those who said they were working in a job.

- The questions were organized into several blocks of questions, which were randomized in order.
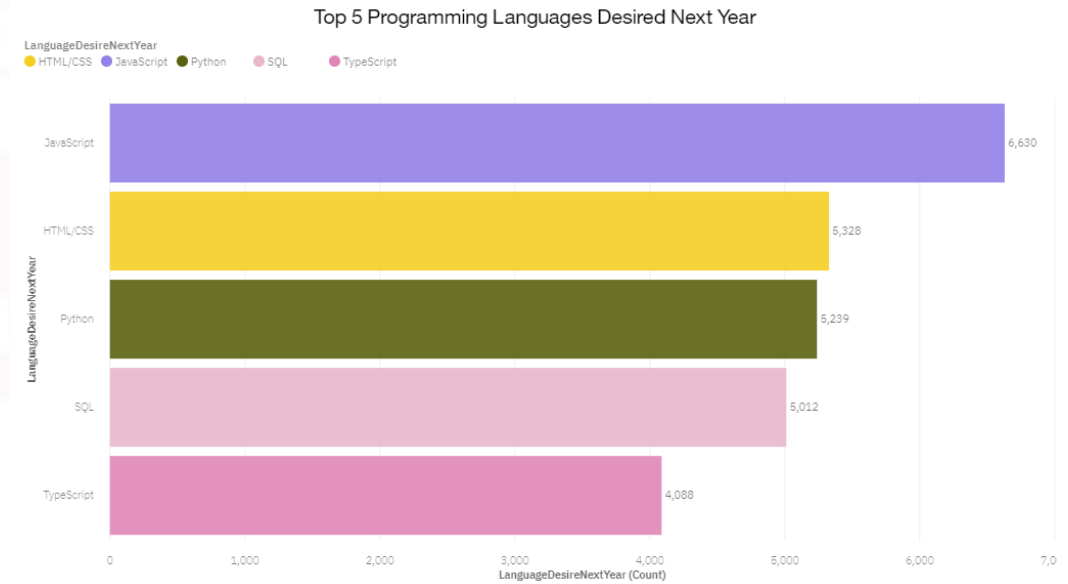
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RESULTS

- Python, the fastest-growing major programming language, has risen in the ranks of programming languages in our survey yet again, edging out Java this year and standing as the second most loved language (behind Rust).

- Over half of respondents had written their first line of code by the time they were sixteen, although this experience varies by country and by gender.

- DevOps specialists and site reliability engineers are among the highest paid, most experienced developers most satisfied with their jobs, and are looking for new jobs at the lowest levels.

- Of the top countries on our survey, China has developers that are the most optimistic, believing that people born today will have a better life than their parents. Developers in Western European countries like France and Germany are among the least optimistic about the future.

PROGRAMMING LANGUAGE TRENDS

Current Year

Next Year

Top 5 Programming Languages Used

LanguageWorkedWith
● Bash/Shell/PowerShell ● HTML/CSS ● JavaScript ● Python ● SQL

JavaScript — 8,687
HTML/CSS — 7,830
SQL — 7,106
Bash/Shell/PowerShell — 4,642
Python — 4,542

Top 5 Programming Languages Desired Next Year

LanguageDesireNextYear
● HTML/CSS ● JavaScript ● Python ● SQL ● TypeScript

JavaScript — 6,630
HTML/CSS — 5,328
Python — 5,239
SQL — 5,012
TypeScript — 4,088

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript has been the most used language current year and desired langue in next year as well

- HTML/CSS has been the second most used language and will be the second In next years as well as desired by users

- BeanShell/Powershell and Python has been almost equal in Usage but on desired basis python might get to lead.

Implications

- Developers use Javscript on almost all platforms as respondents language usages combination.

- HTML/CSS are being used by developers for designing and mostly search for solution of available properties.

- Developers working in Python has been increasing and the community has also gowrn with many Q&A recently.

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DATABASE TRENDS

Current Year — Top 5 Databases Used
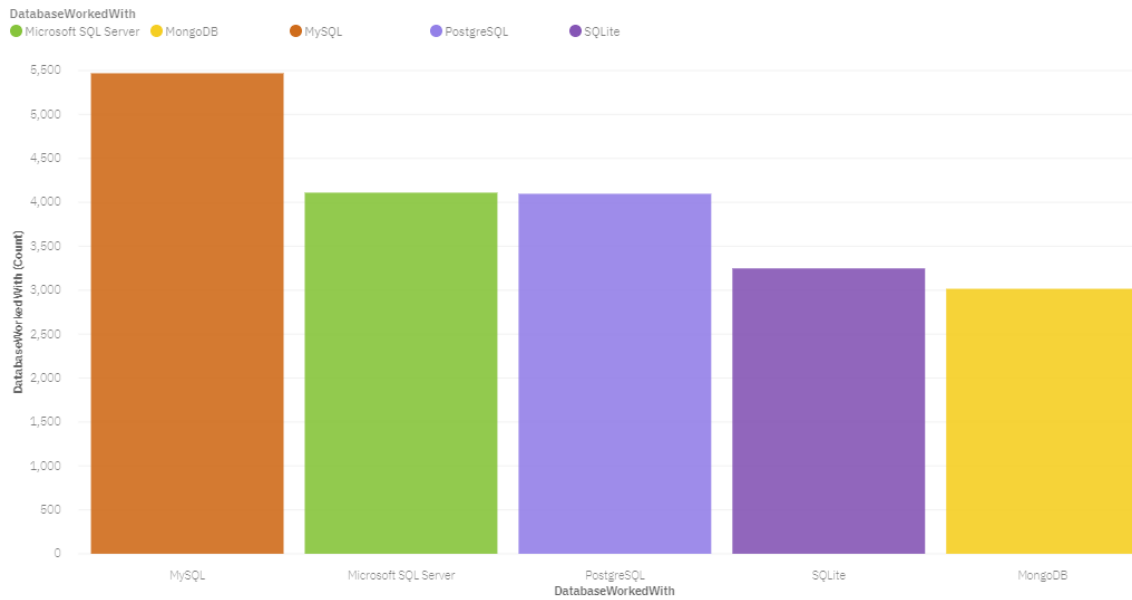
Next Year — Top 5 Databased Desired Next Year
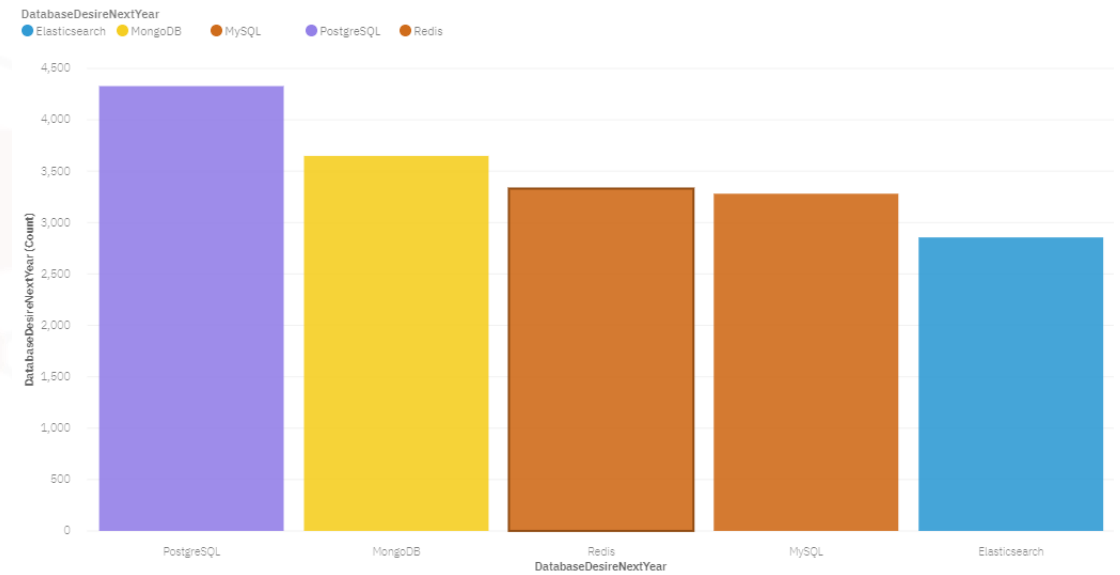
DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySql has been the most used Database but not much desired next year by significant number of users

- Miscrosoft SQL Server has been the second most popular Database but its not being desired next year by may developers.

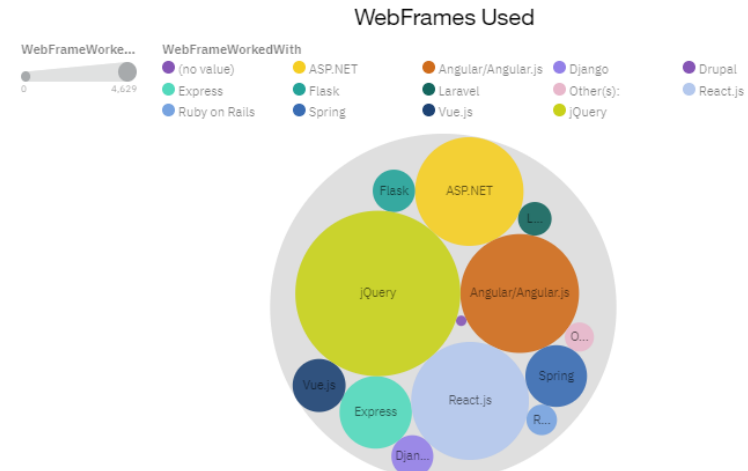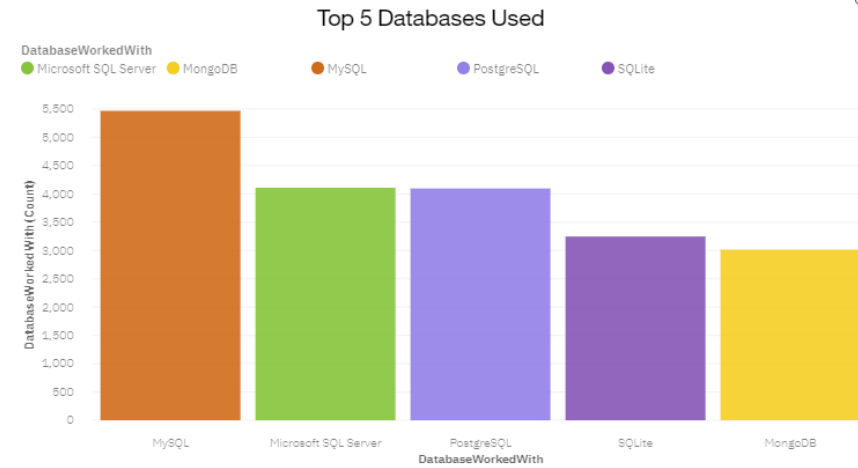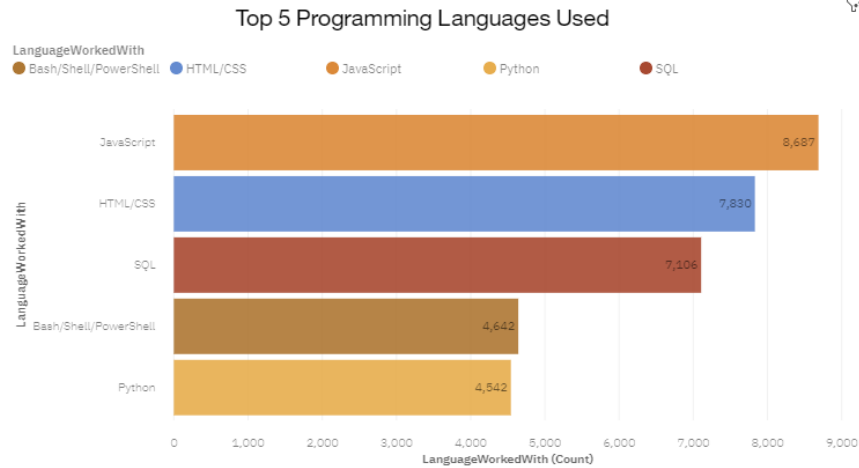- PostgreSql has been on the top 3 but the usage and preference is increasing and more desired next year.

Implications

- MySQL has been on the top for so many years and is still the top most prefered language.

- MongoDb is being preferred by many developers as it is more performance and compact in usage and development.

- Since AWS is in trend recently ElasticsSearch DB is preferred
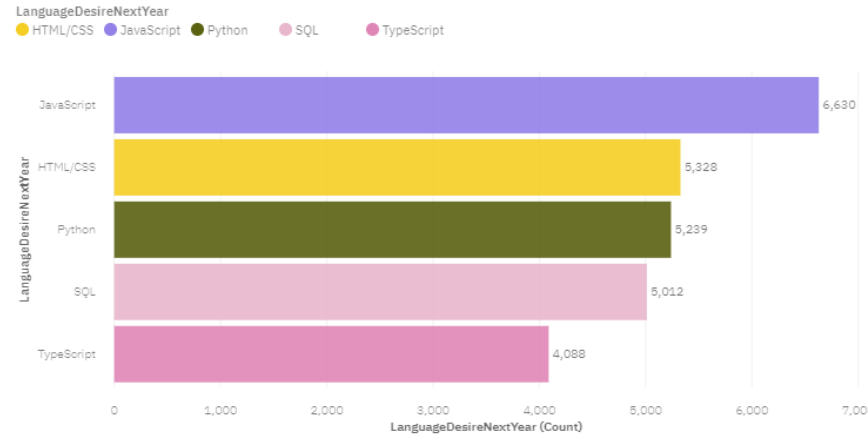
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DASHBOARD

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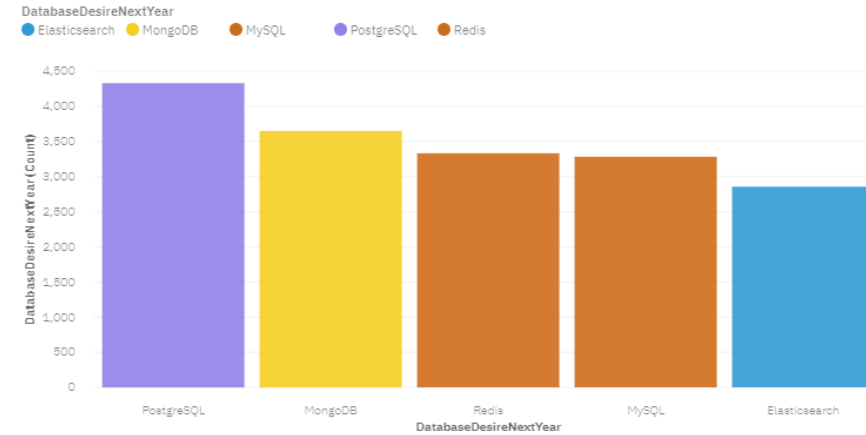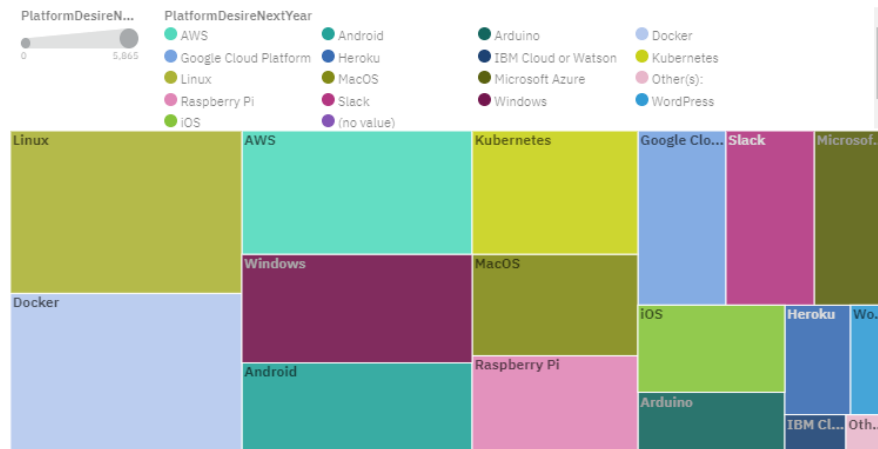
DASHBOARD TAB 1

DASHBOARD TAB 2
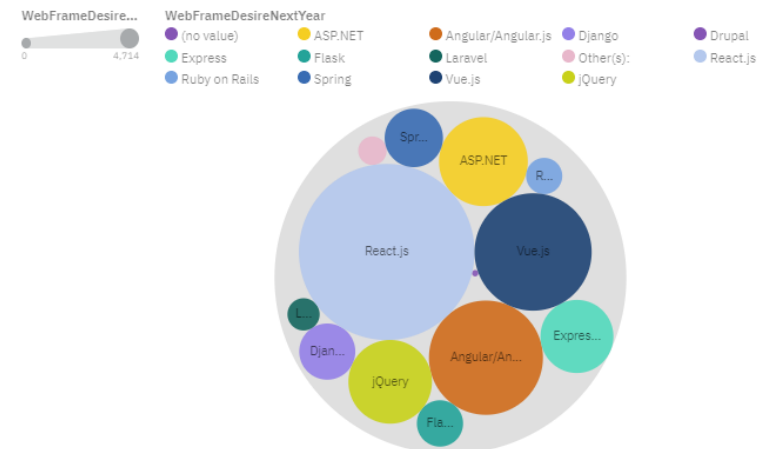

Top 5 Programming Languages Desired Next Year
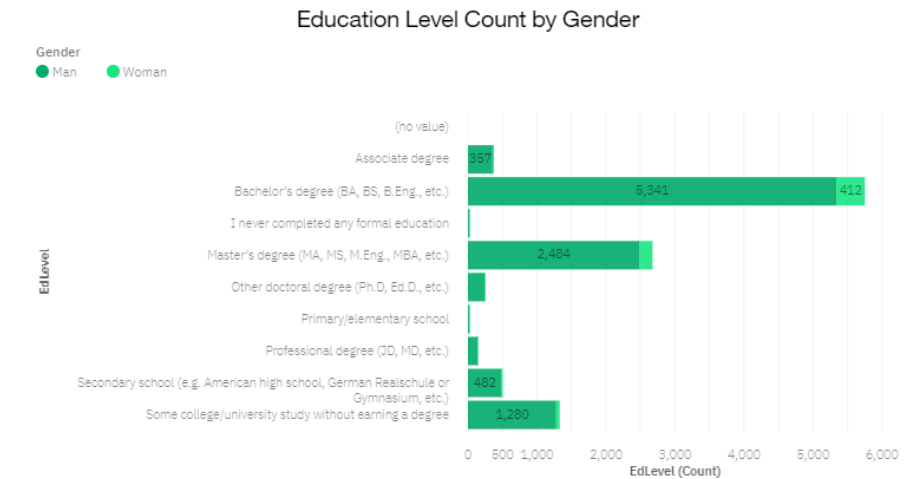
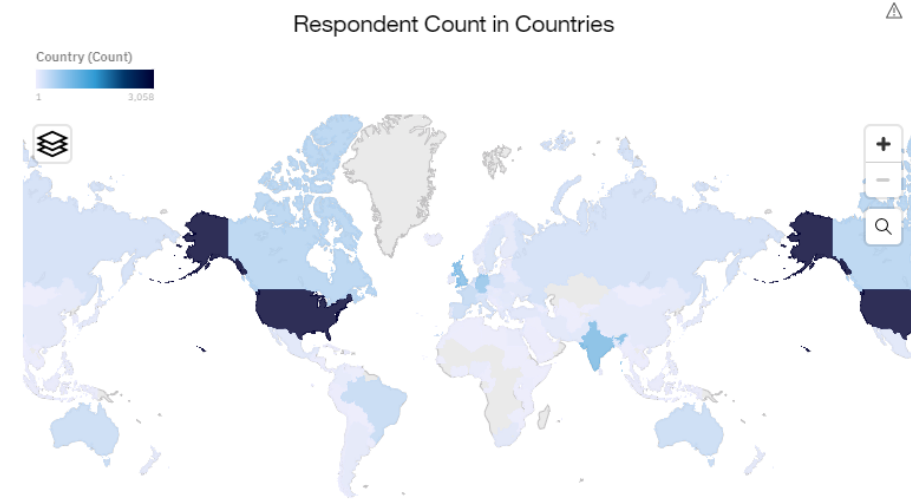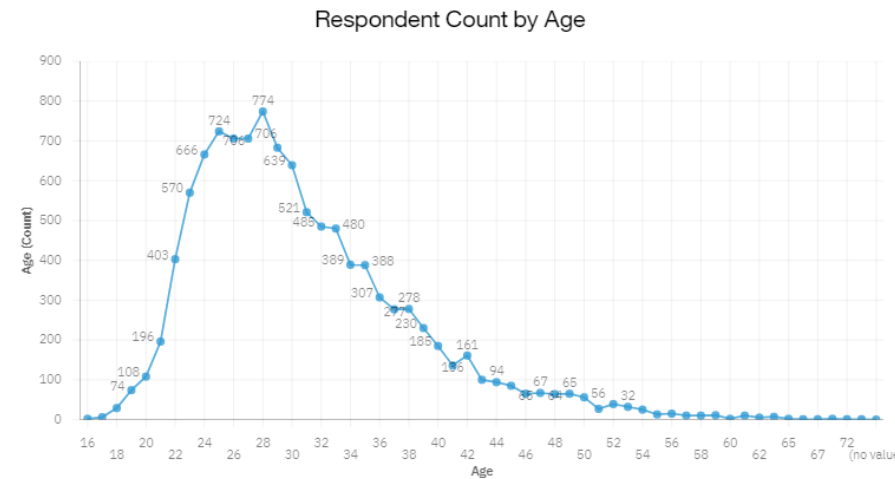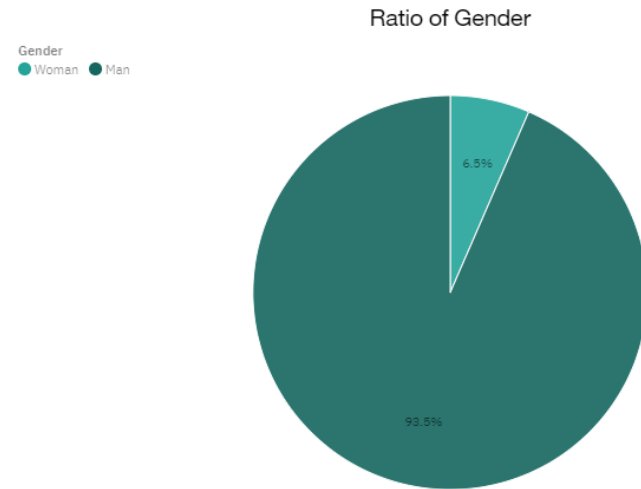Top 5 Databased Desired Next Year

Platforms Deired Next Year

WebFrames Desired Next Year

DASHBOARD TAB 3

DISCUSSION

- Developers visit Stack Overflow. A lot. Our survey respondents likely visit even more than the average developer, since a majority of respondents found the survey from Stack Overflow emails, notifications, and banners. Over 85% of respondents visit Stack Overflow at least a few times per week, with over 60% visiting every day. In the United States, there are only slight shifts between the results weighted by gender and unweighted results on visit frequency.

OVERALL FINDINGS & IMPLICATIONS

Findings

- Stack overflow is being accessed by low experienced developers between 0-5years

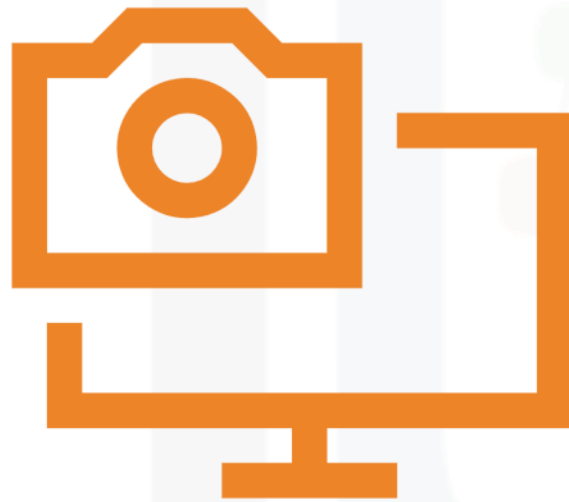- Frameworks has also changed its trend from jquery to ReactJS

Implications

- This finding bring more advantage towards usage based on age as experience comes in.

- These framework helpsi in developers to move towards the trend on upskilling to new technologies.
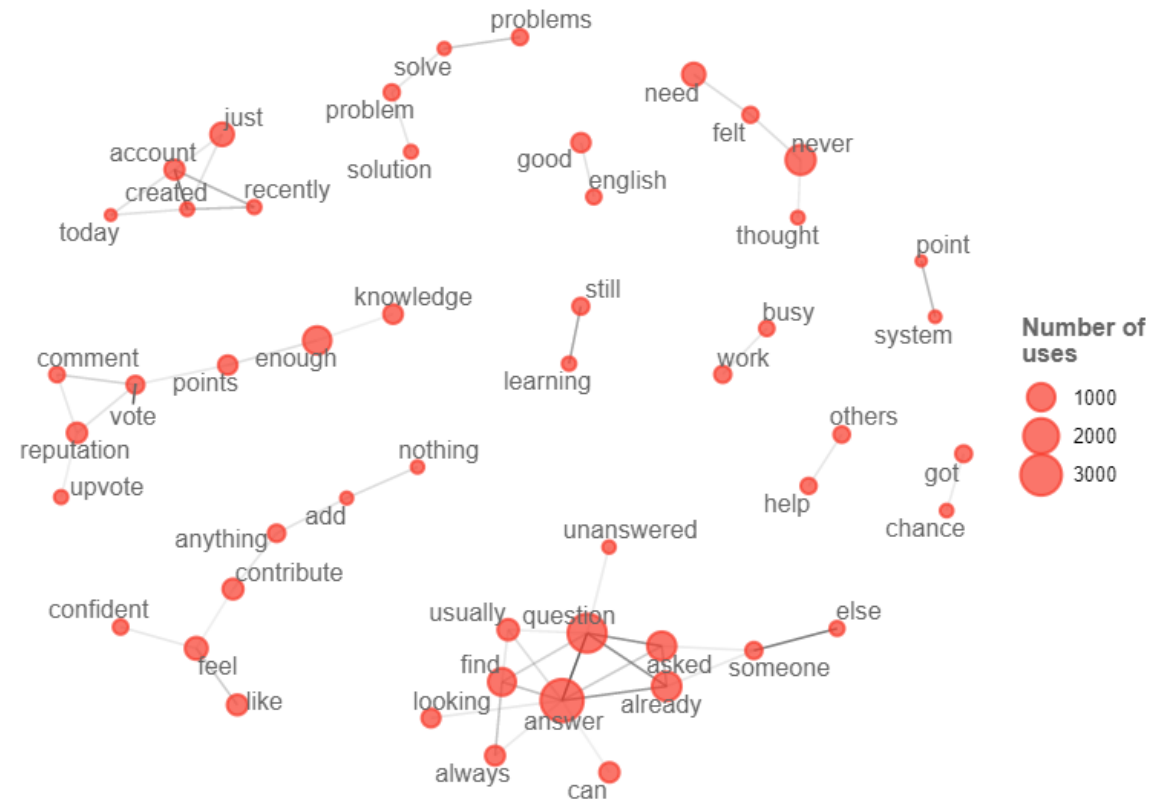
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CONCLUSION

- For the seventh year in a row, JavaScript is the most commonly used programming language, but Python has risen in the ranks again. This year, Python just edged out Java in overall ranking, much like it surpassed C# last year and PHP the year before. Python is the fastest-growing major programming language today.

- This year, on anlaysis about frameworks for the web separately from other frameworks and libraries. jQuery is the most broadly used of these web frameworks, and this year more developers say they use React.js than Angular, a switch from last year.

- Globally, respondents who use Clojure, F#, Elixir, and Rust earn the highest salaries, with median salaries above $70,000 USD. There are regional variations in which languages are associated with the highest pay. Scala developers in the US are among the highest paid, while Clojure and Rust developers earn the most in India.

- For the fourth year in a row, Rust is the most loved programming language among our respondents, followed close behind by Python, the fastest-growing major language today. This means that proportionally, more developers want to continue working with these than other languages.
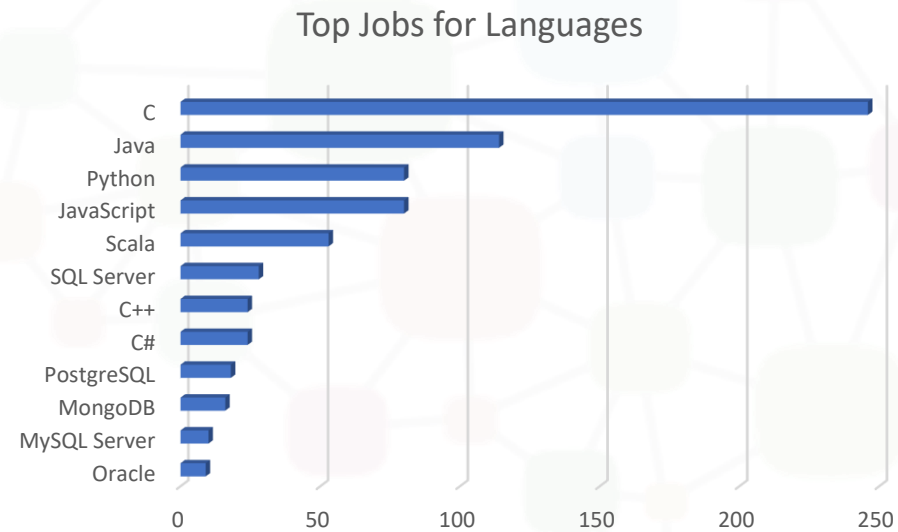
APPENDIX

Why Don't Developers Participate on Stack Overflow?

GITHUB JOB POSTINGS

Top Jobs for Languages

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POPULAR LANGUAGES

Average Annual Salary

PHP	
SQL	
C#	
R	
Go	
Java	
Javascript	
C++	
Python	
Swift	

$- $20,000.00 $40,000.00 $60,000.00 $80,000.00 $1,00,000.00 $1,20,000.00 $1,40,000.00