# 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

- Data analysis context and goals

- Methodology
  - Collection of data
  - Analysis
  - Visualization

- Presentation of results and findings

- Discussion

- Final research conclusion

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# INTRODUCTION

### Stack Overflow's annual Developer Survey

- Purpose: The survey aims to provide insights into the developer ecosystem, including trends in programming languages, frameworks, working environments, and career satisfaction.

- Scope: It covers a wide range of topics, from favorite technologies to job preferences and developer demographics.

- Participants: Developers from around the world participate, typically numbering in the tens of thousands each year.

- Frequency: As the name suggests, it's conducted annually, usually in the first quarter of the year.

# METHODOLOGY

- Collect the required data using web scraping and APIs.

- Data wrangling

- Analysis
  - Data distribution
  - Outliers
  - Correlations

- Data Visualization
  - Present our data analysis visually

- Dashboards
  - Current period trends
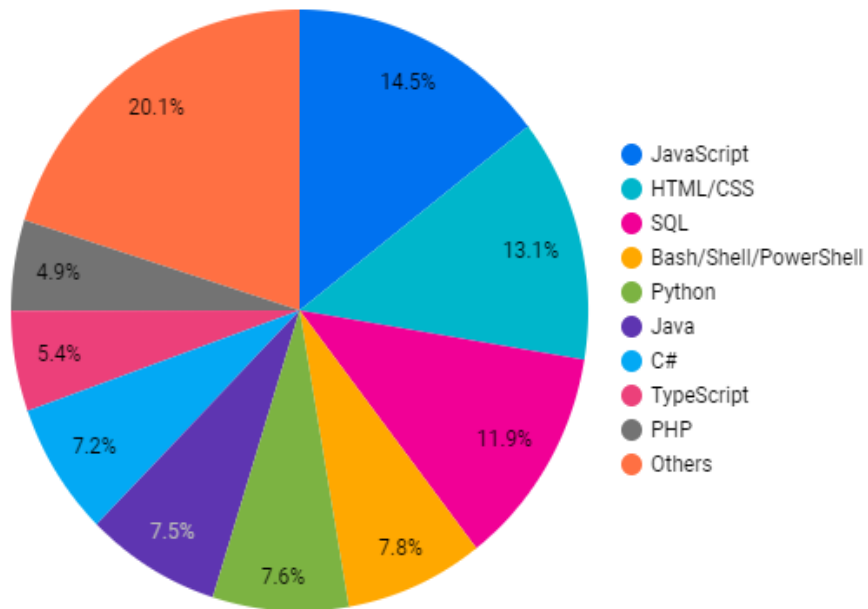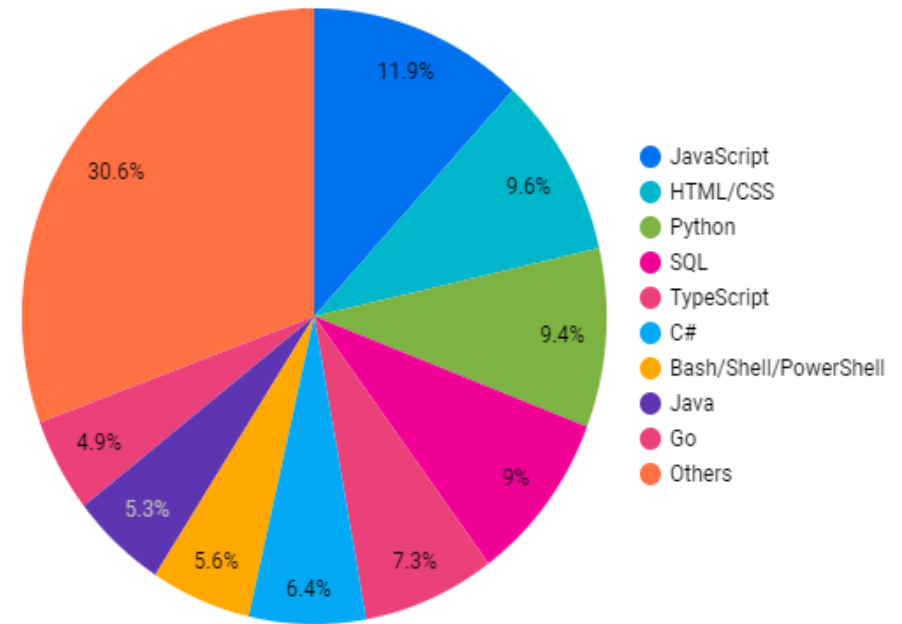  - Future period trends

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# RESULTS

# PROGRAMMING LANGUAGE TRENDS

## Current Year



| | |
|---|---|
| ● | JavaScript |
| ● | HTML/CSS |
| ● | SQL |
| ● | Bash/Shell/PowerShell |
| ● | Python |
| ● | Java |
| ● | C# |
| ● | TypeScript |
| ● | PHP |
| ● | Others |

## Next Year



| | |
|---|---|
| ● | JavaScript |
| ● | HTML/CSS |
| ● | Python |
| ● | SQL |
| ● | TypeScript |
| ● | C# |
| ● | Bash/Shell/PowerShell |
| ● | Java |
| ● | Go |
| ● | Others |

# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

## Findings

- Python is growing fast

- JavaScript will remain the most popular language

- PHP will not be in top 10 next period

## Implications

- JavaScript and TypeScript are relevant and related

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# DATABASE TRENDS

Current Year
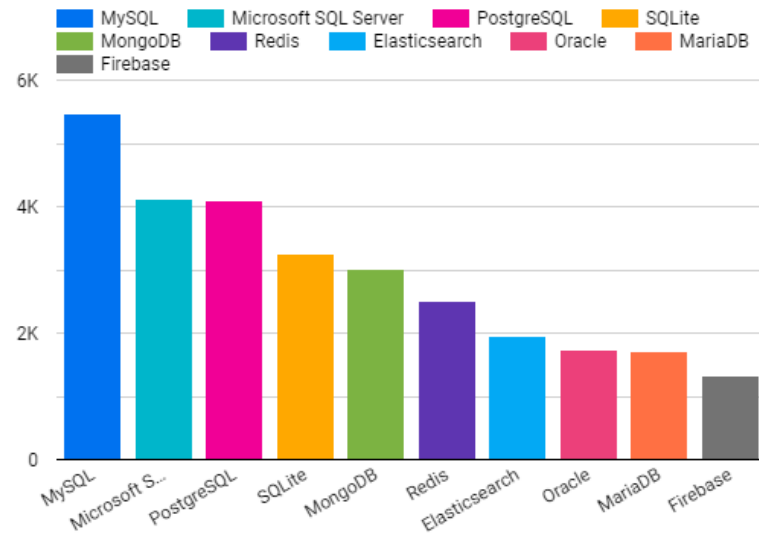
Next Year
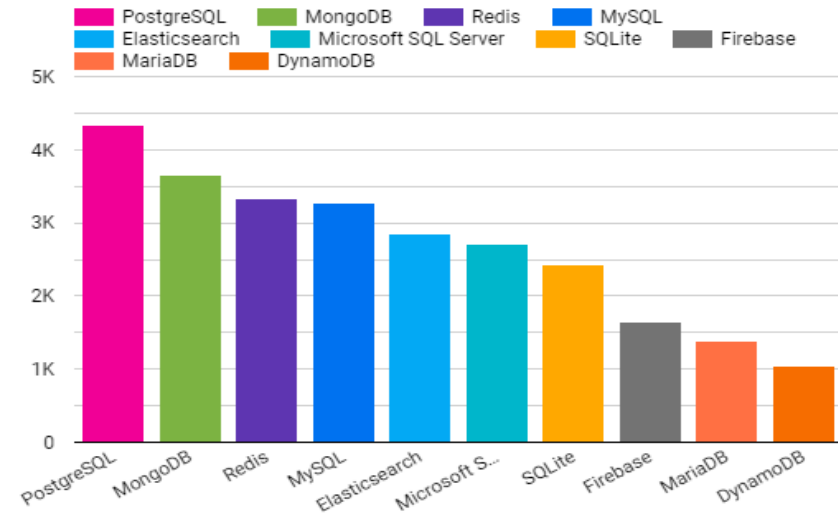
# DATABASE TRENDS - FINDINGS & IMPLICATIONS

## Findings

- Postgres will become the most popular DBMS in the next period

- MongoDB is becoming more popular

- Microsoft SQL is loosing following

## Implications

- MySQL and MariaDB are related

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# DASHBOARD

https://lookerstudio.google.com/reporting/d76d239f-062c-4a65-9e5d-84526da557ce

# CURRENT TRENDS



Top 10 LanguageWorkedWith
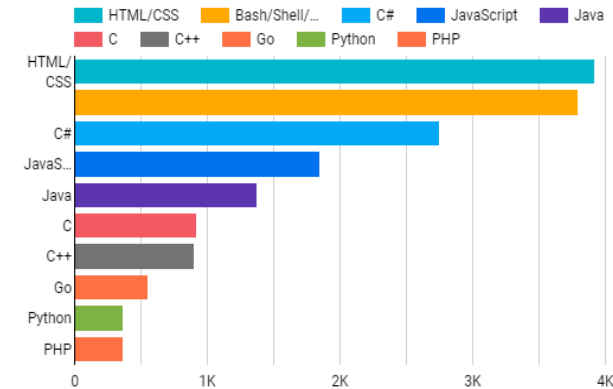
Top 10 DatabaseWorkedWith
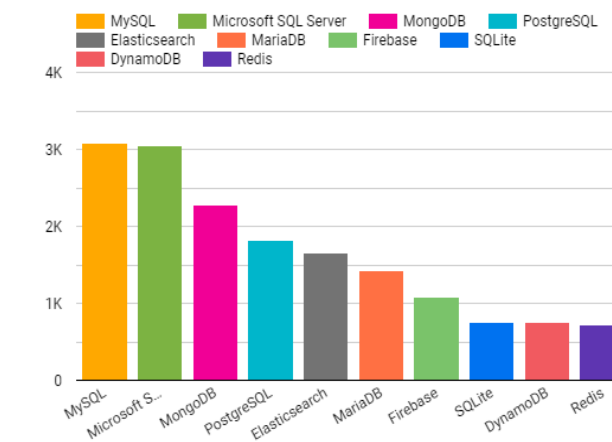
PlatformWorkedWith

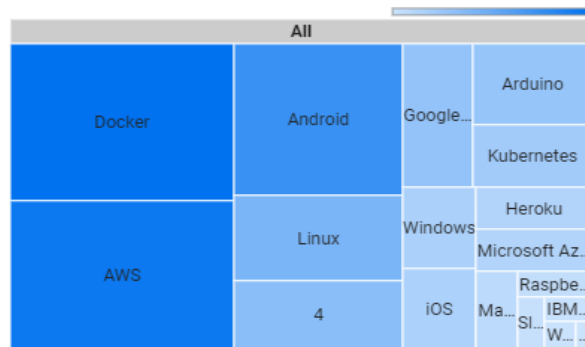Top 10 WebFrameWorkedWith
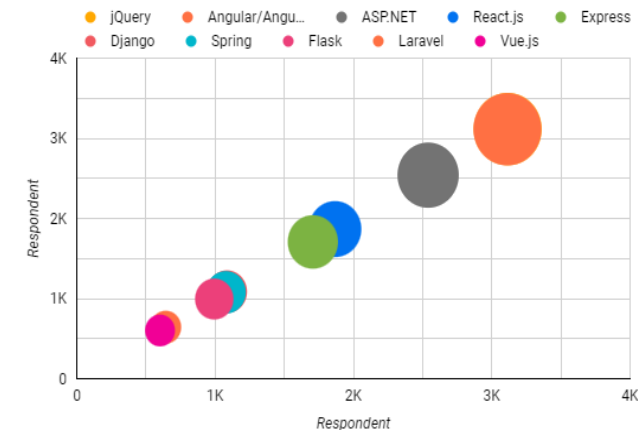
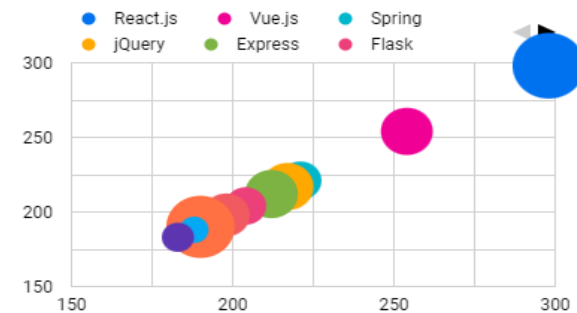# FUTURE TRENDS


Top 10 LanguageDesireNextYear
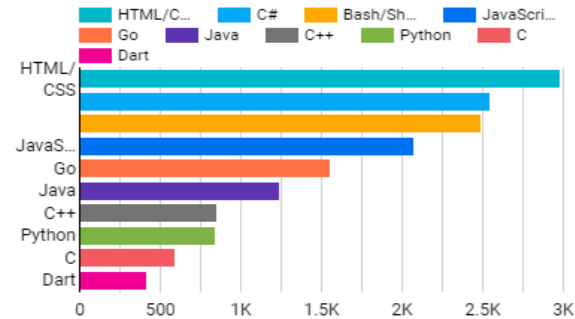

Top 10 DatabaseDesireNextYear
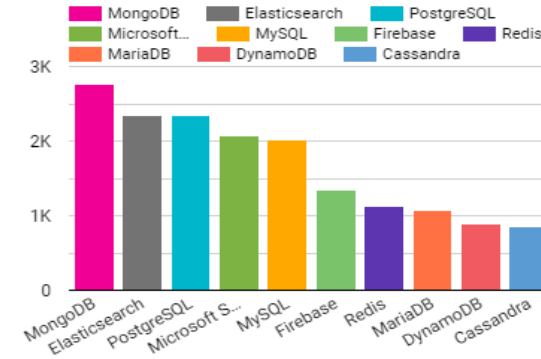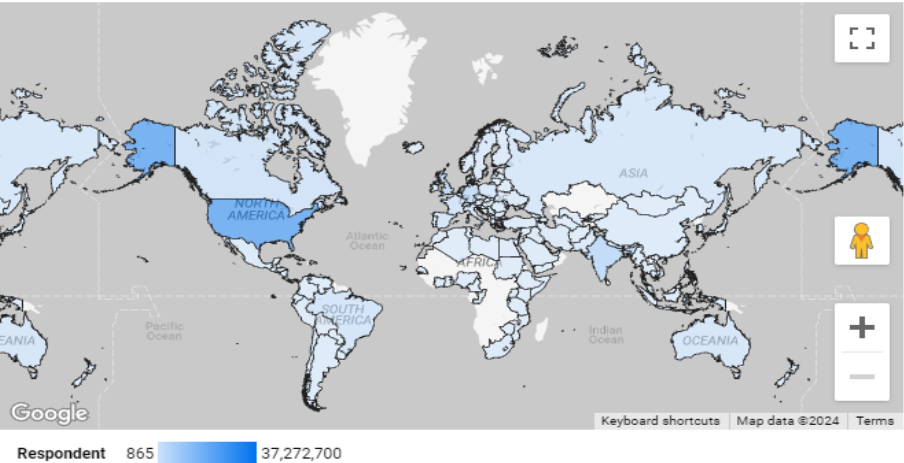

PlatformDesireNextYear


Top 10 WebFrameDesireNextYear

# DASHBOARD
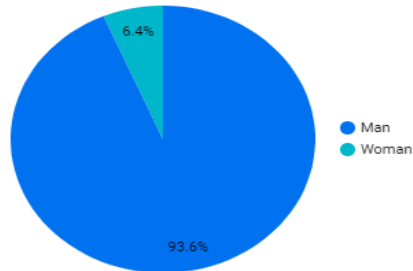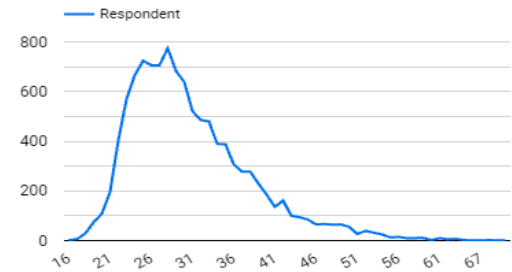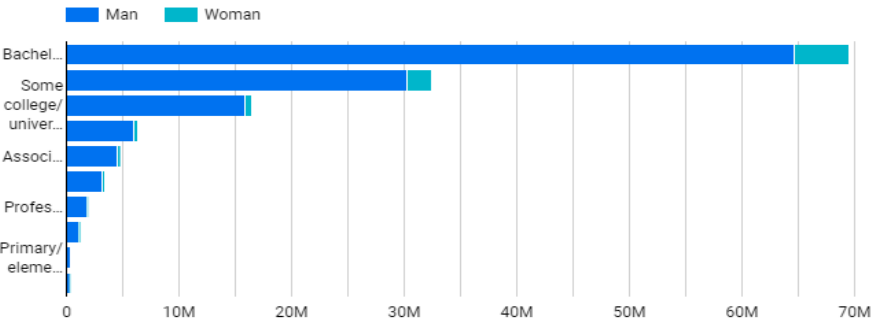
# OVERALL FINDINGS & IMPLICATIONS

## Findings

- Most developers are young people

- Most developers are male

- Most developers are located in developed countries

- There is a shift towards open-source technologies

## Implications

- Data might be biased or over/under-stated or inaccurate in general

- StackOverflow's userbase might not be so generic
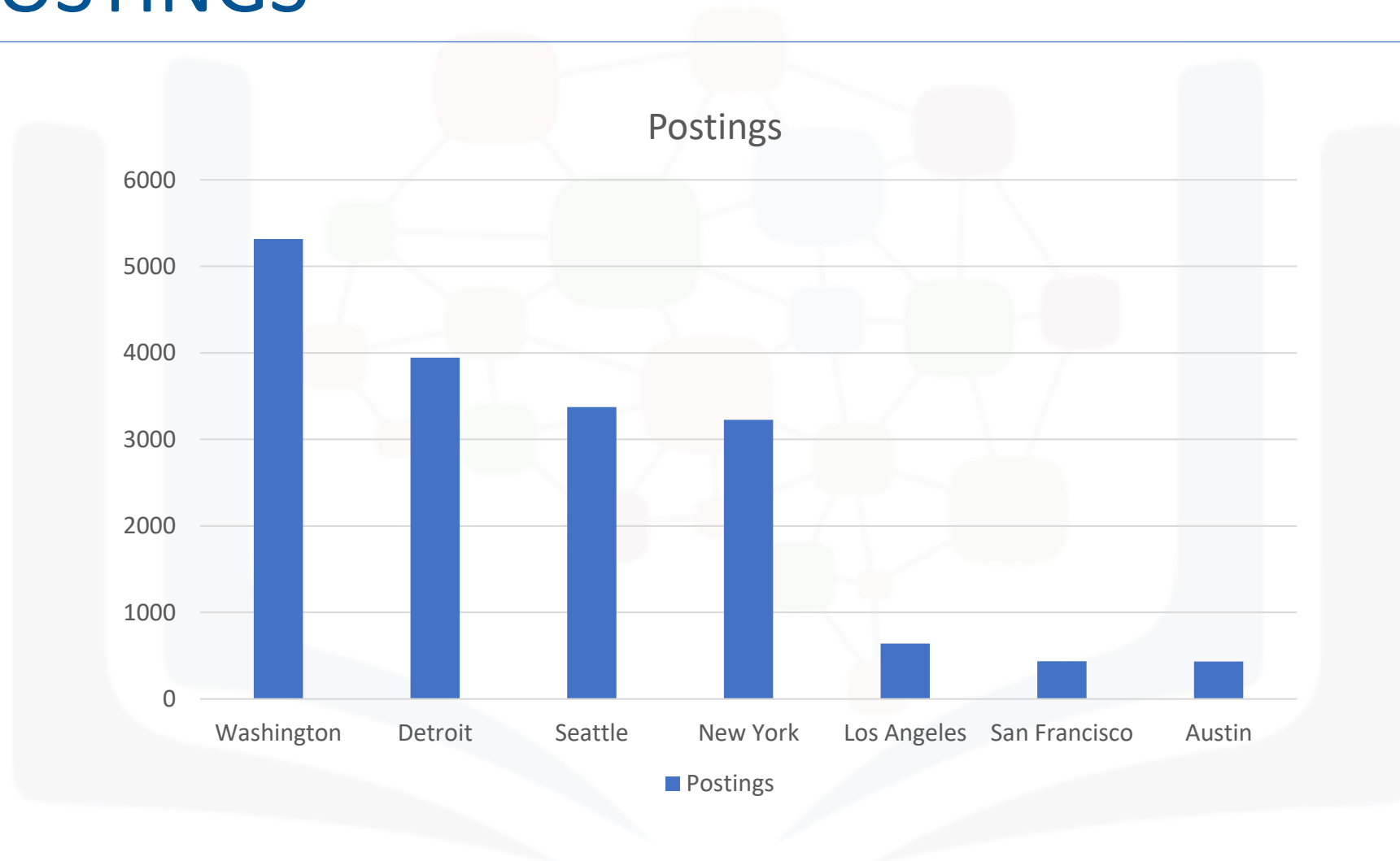
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# CONCLUSION

- The software development profession is mostly male-dominated
- In contrast with the above, there is a large variety of programming languages and databases
- Open-source projects are becoming more popular
- Younger people tend to prefer the software developer profession
- There are always outliers and small minorities, people who do things differently

# JOB POSTINGS


Postings

# POPULAR LANGUAGES



Salaries