



Emerging Skills Report

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OUTLINE



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

EXECUTIVE SUMMARY



- Javascript is the most common language
 - Will continue to be moving forward
- MySQL is the most common database
 - Will be surpassed by PostgreSQL, MongoDB
 - Sub Point 2
 - Sub Point 3
- Linux is the most popular platform
 - Docker expected to reach similar usage moving forward
- iQuery is the most popular webframe
 - Usage expected to decrease significantly moving forward

INTRODUCTION



- Desire to keep pace with emerging technologies
- Necessary to identify potential skills gaps
 - Current skills/demands
 - Expected future skills/demands
 - Demographics of the industry

METHODOLOGY



- Main data source was a StackOverflow survey
 - <https://stackoverflow.blog/2019/04/09/the-2019-stack-overflow-developer-survey-results-are-in>
- Data was cleaned to remove outliers, duplicates, and empty values
- Analysis performed using Jupyter Notebooks and cognos dashboards
- Additional data obtained via utilization of the GitHub jobs API and webscraping

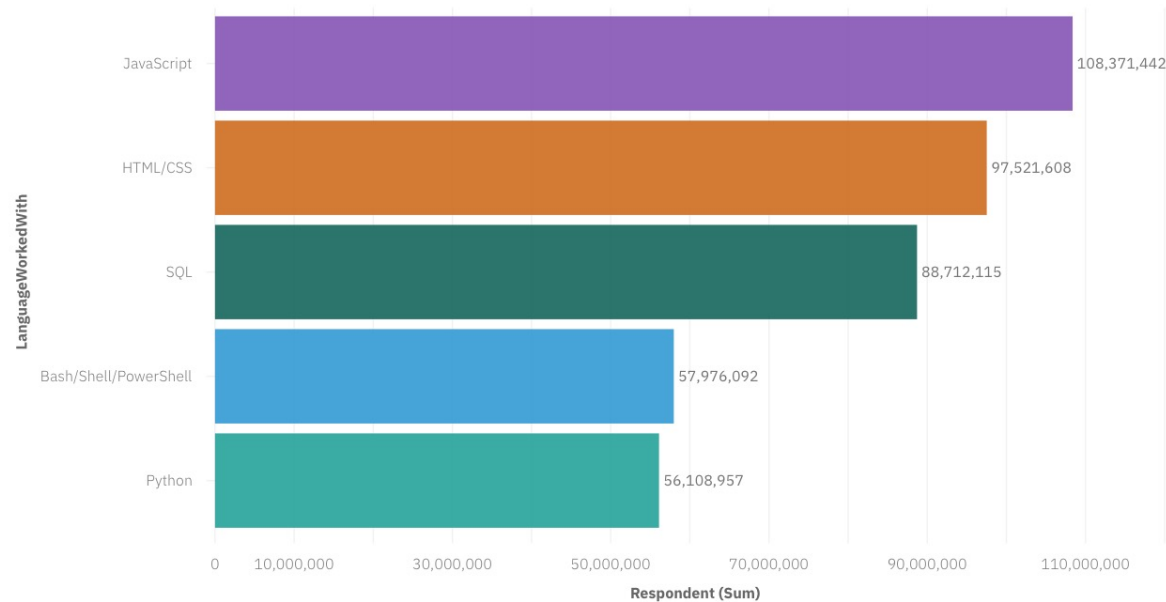
RESULTS and Discussion



PROGRAMMING LANGUAGE TRENDS

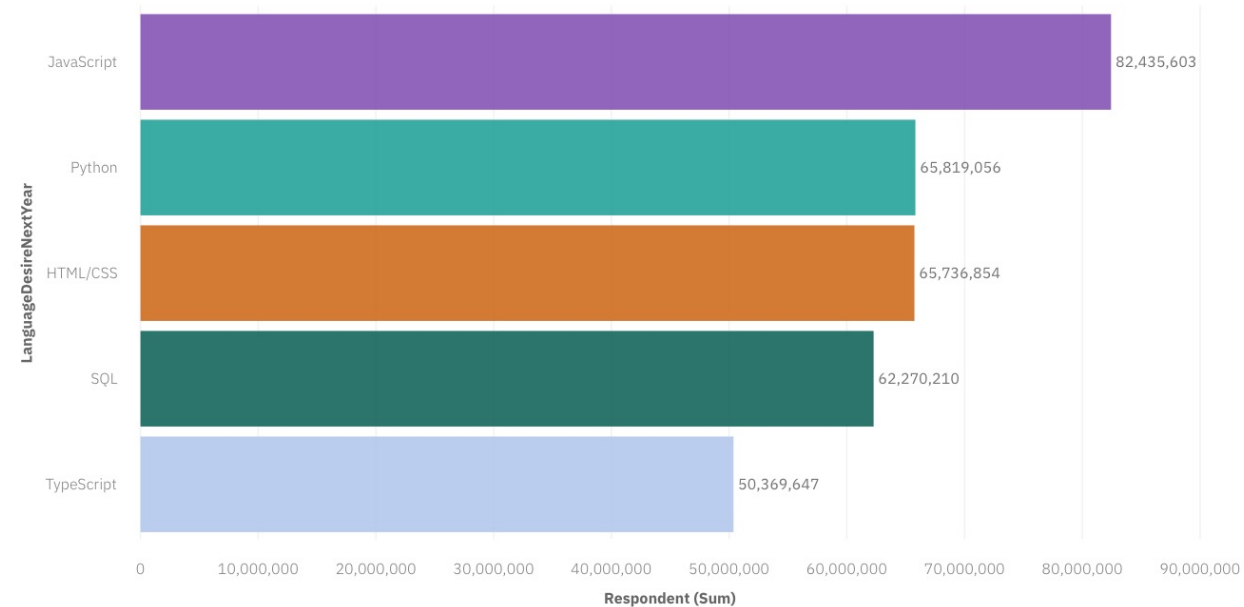
Current Year

Top 5 Languages



Next Year

Top 5 Desired Languages



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Javascript is in highest demand
- Python expected to see sharp increase in relative demand
- Bash/Shell/Powershell will see a significant decrease in demand

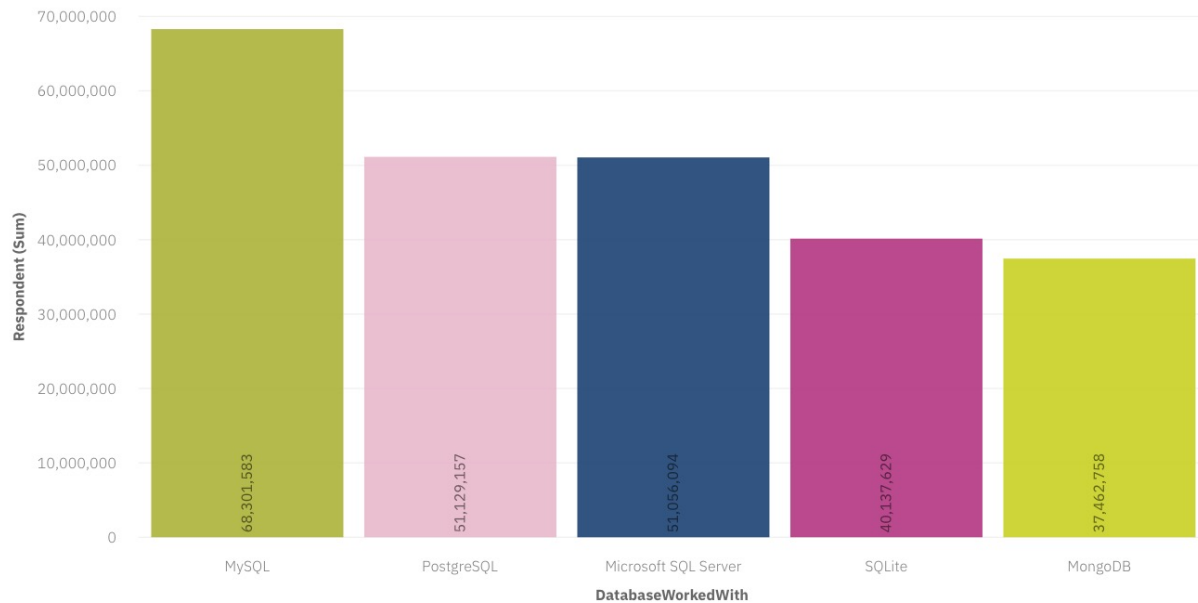
Implications

- Need to maintain current workforce
- Need to ensure adequate training/upskilling of workforce
- Can decrease pursuit of these technologies/languages

DATABASE TRENDS

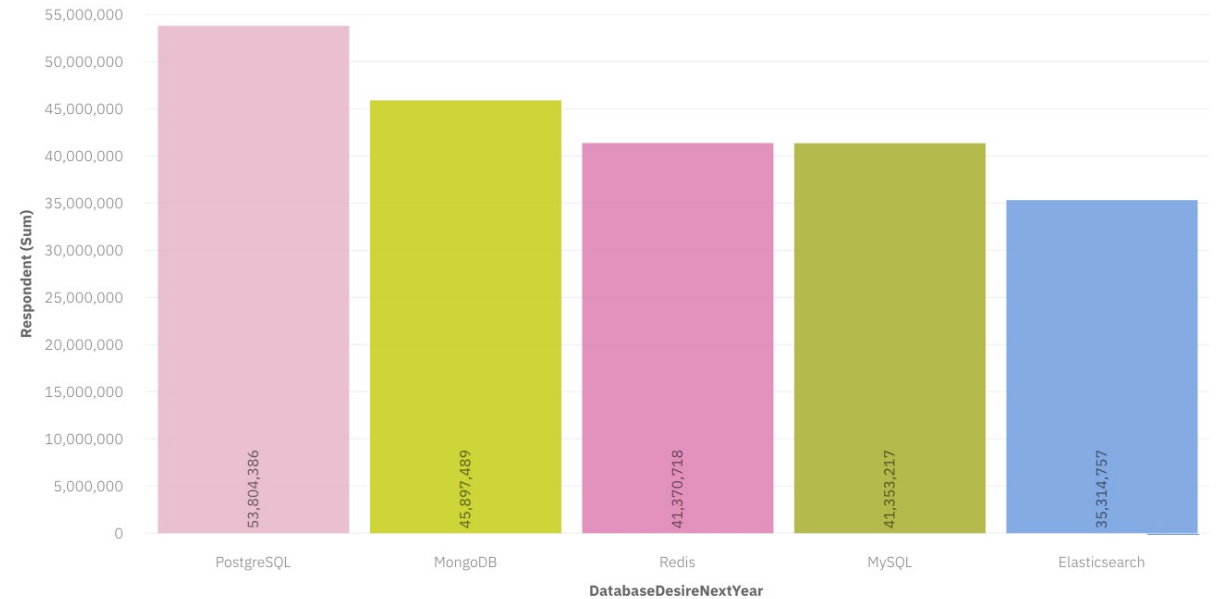
Current Year

Top 5 Databases



Next Year

Top 5 Desired Databases



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is currently the most popular database
- PostgreSQL to overtake MySQL next year
- MongoDB to see significant growth next year
 - Will also overtake MySQL
- MySQL and Microsoft SQL server to see significant decline next year

Implications

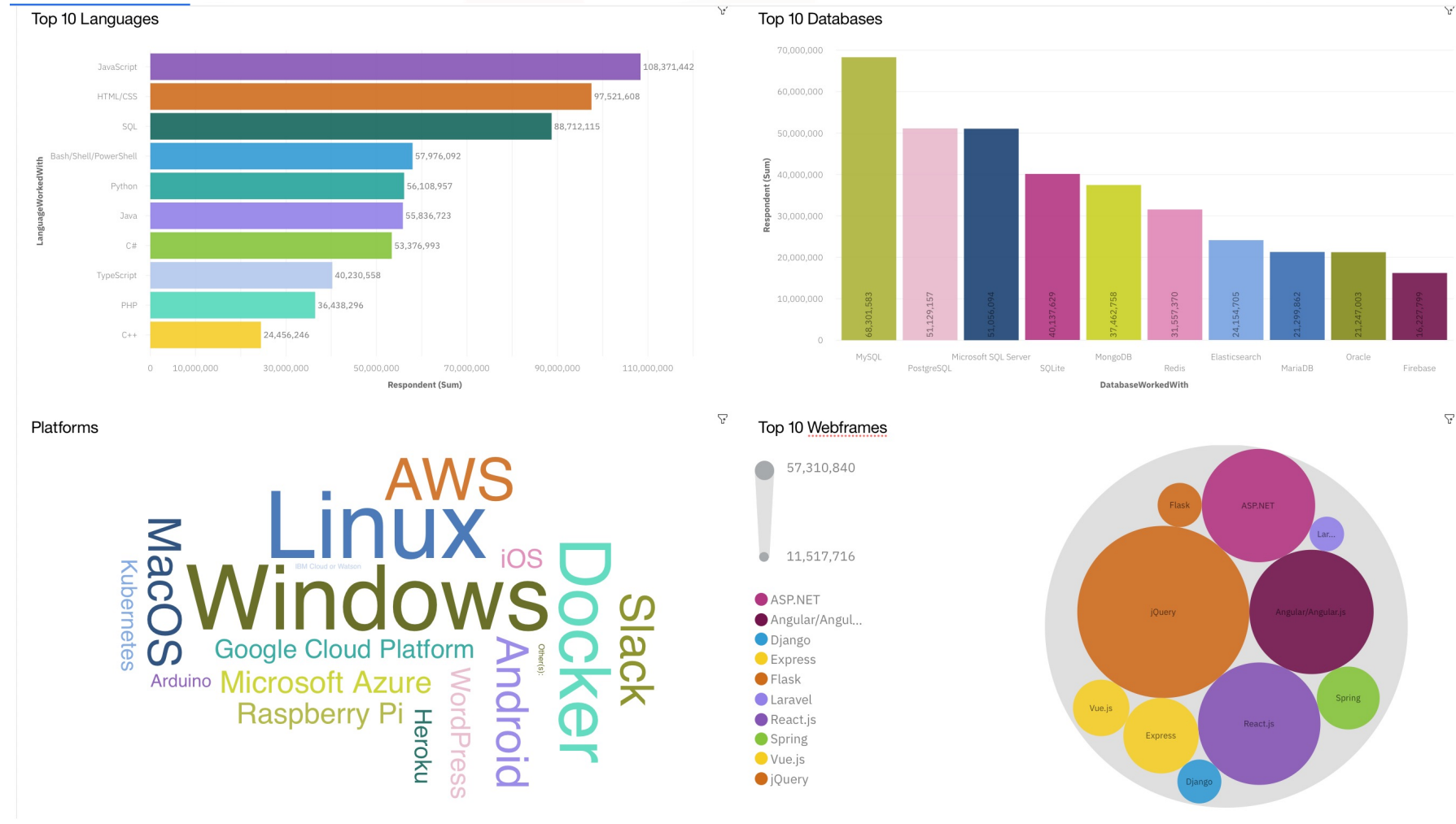
- Less emphases on training for MySQL/MySQL technologies
- Upskill/hire workers proficient with PostgreSQL, MongoDB
- Less focus on Microsoft SQL server going forward

DASHBOARD



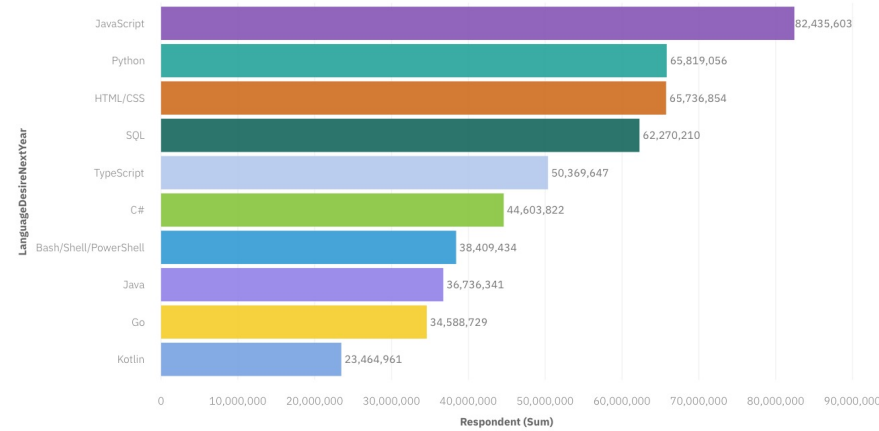
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DASHBOARD – Current Technology Usage

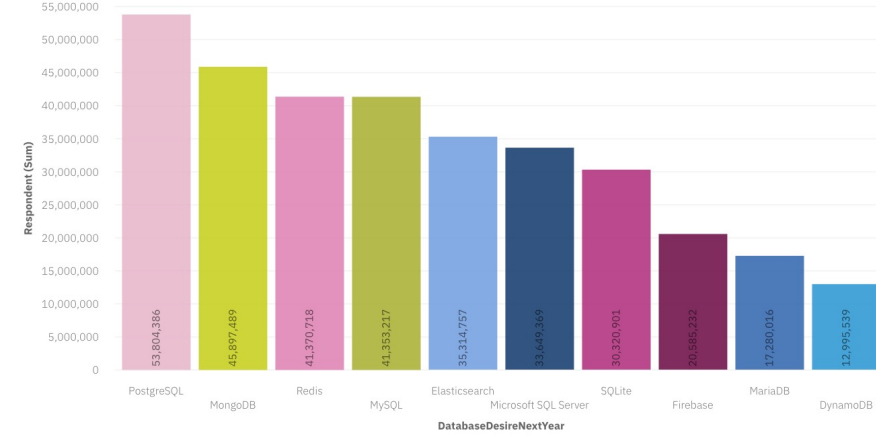


DASHBOARD – Future Technology Trend

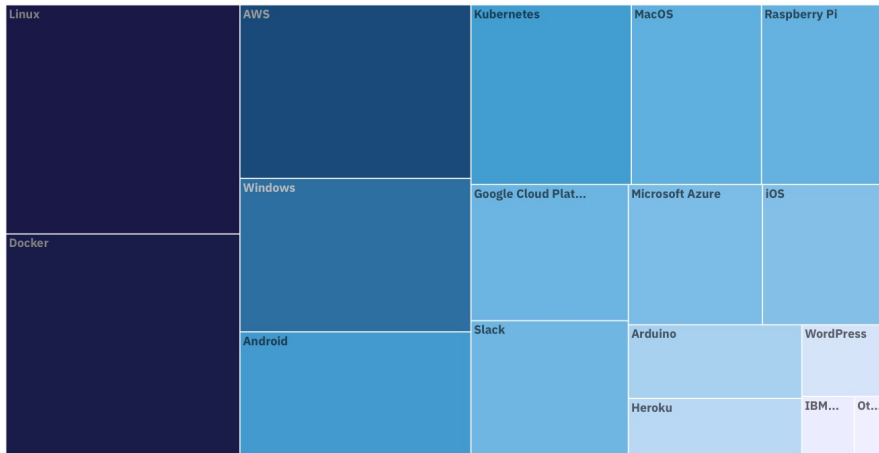
Top 10 Desired Languages



Top 10 Desired Databases

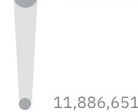


Platforms Desired



Top 10 Desired Webframes

Respondent (Sum)



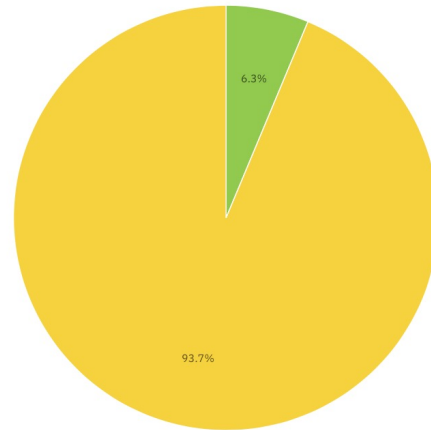
WebFrameDesireNextYear



DASHBOARD – Demographics

Respondents by Gender

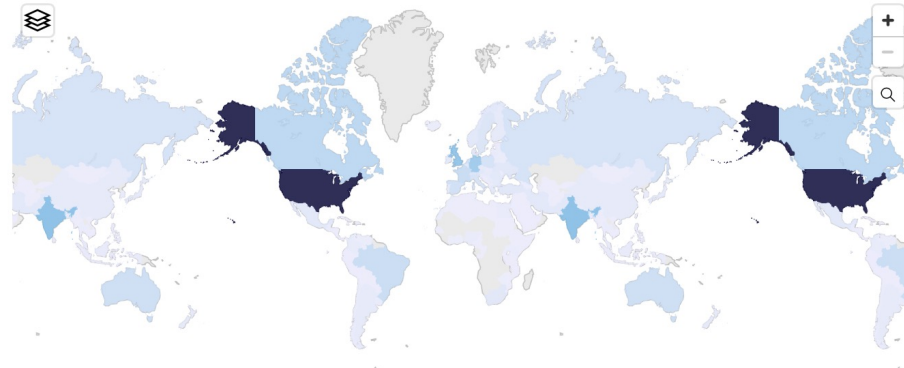
Wo... Man



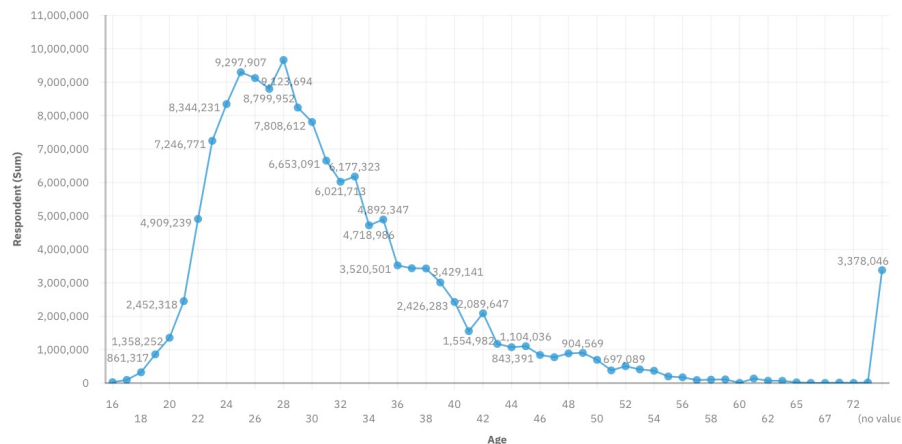
Response by Country

Country (Count)

1 3,058

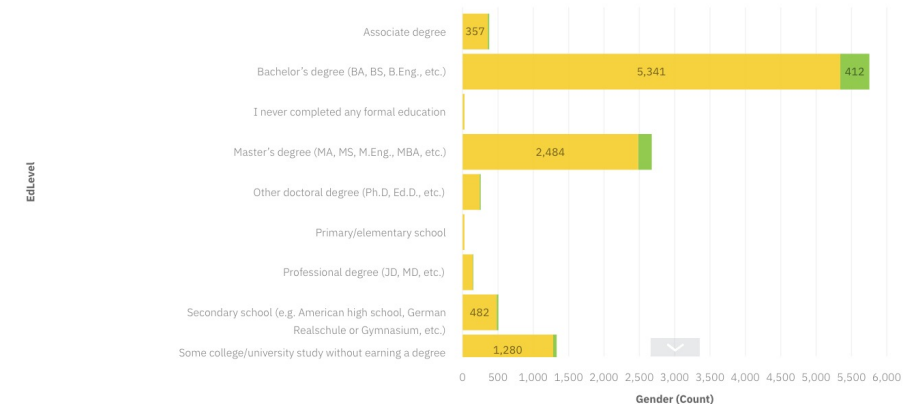


Response by Age



Response by Gender and Education

Man Wo...



OVERALL FINDINGS & IMPLICATIONS

Findings

- Javascript will remain top programming language
 - Some shuffling amongst other top languages, esp. Python
- Significant change in databases
 - MySQL significant decline
 - MongoDB and PostgreSQL significant increase in demand
- iQuery will be replaced by React.js as the top webframe

Implications

- Maintain Javascript capabilities, while expanding Python capabilities
- Shift focus from MySQL to MongoDB and PostgreSQL
- Train and upskill workforce/infrastructure to handle React.js instead of iQuery

CONCLUSION



- The demand of programming languages, databases, and webframes is expected to change over the next year
- Training/workforce management will be needed to ensure all needs are met
- This presentation has demonstrated the major gaps that need to be addressed
- Further work can be done to determine the costs for upscaling the current workforce

APPENDIX



- Additional charts and data used to draw the conclusions found in this presentation

DASHBOARD - Platforms

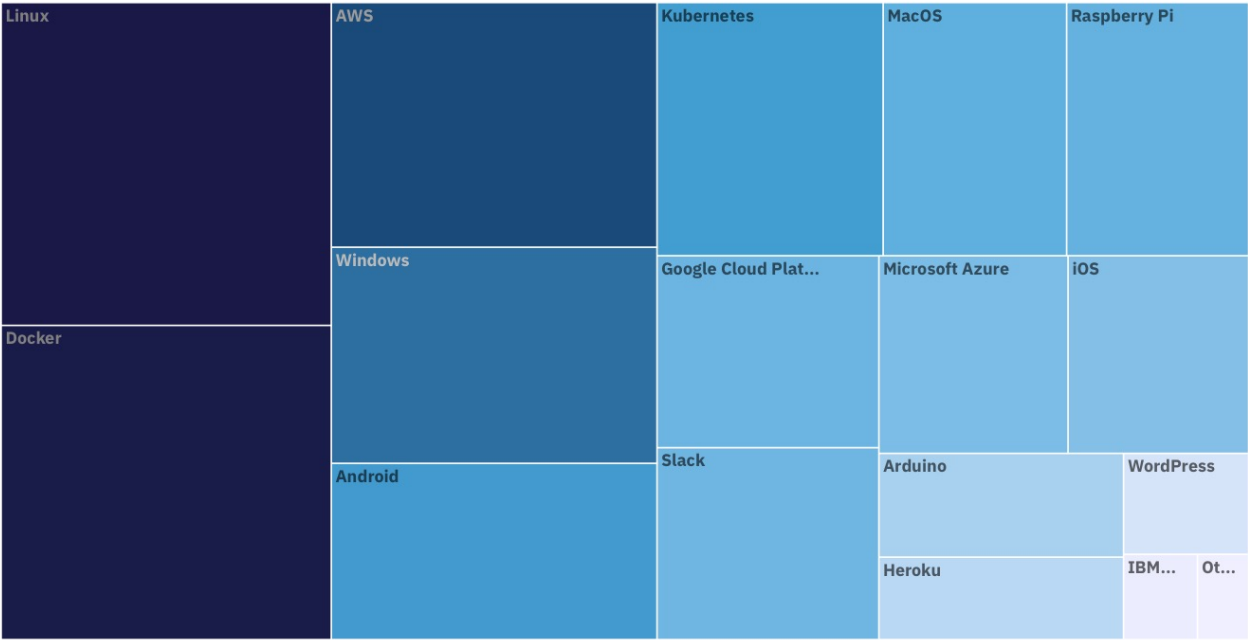
Current Year

Platforms



Next Year

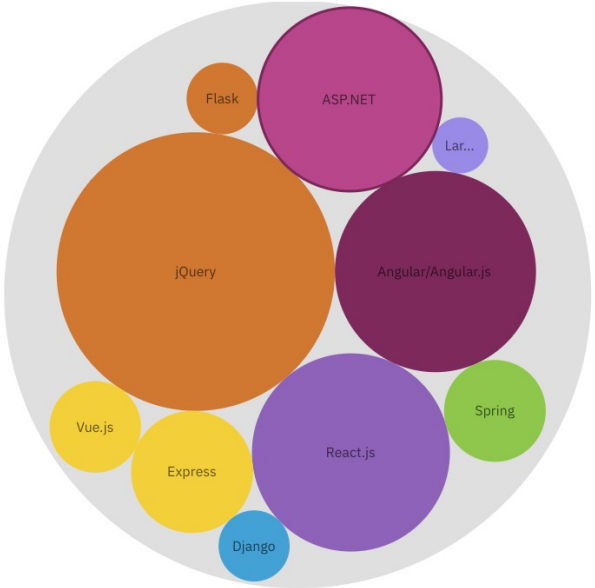
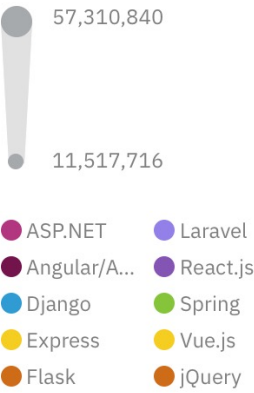
Platforms Desired



DASHBOARD – Webframes

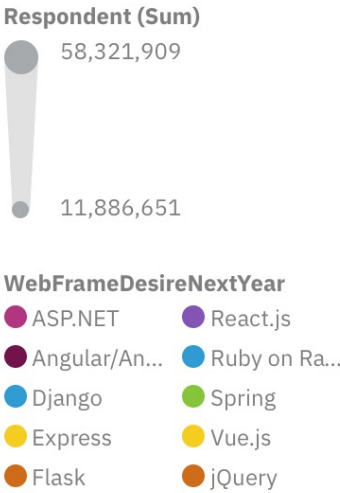
Current Year

Top 10 Webframes



Next Year

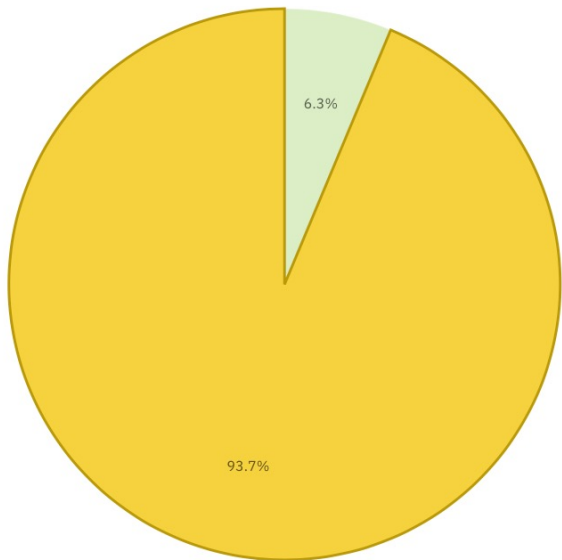
Top 10 Desired Webframes



DASHBOARD – Demographics

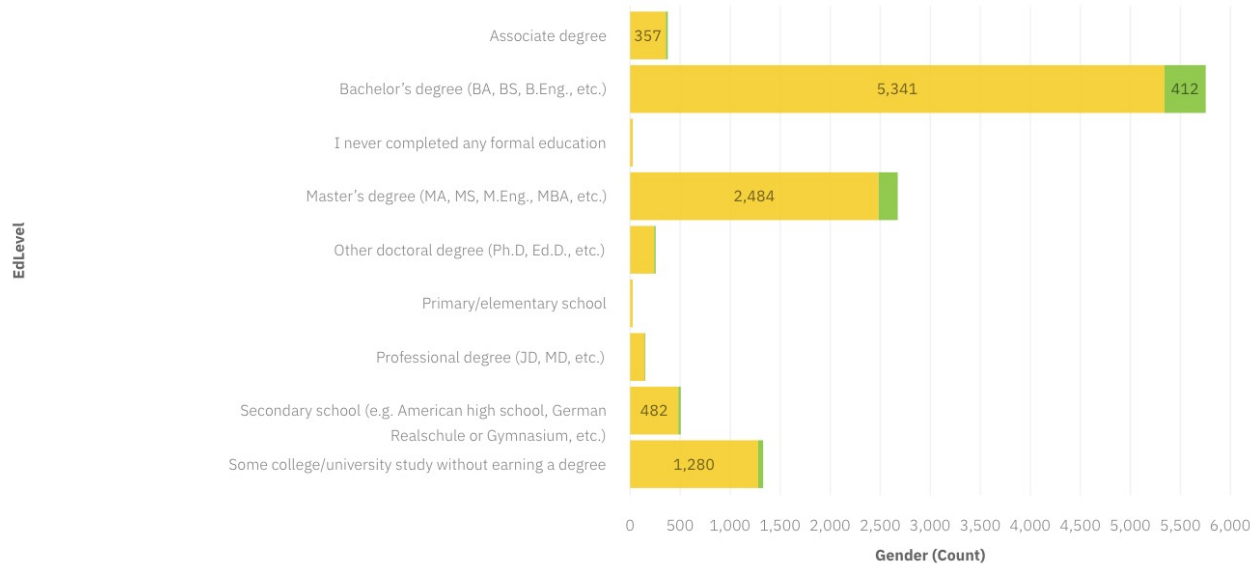
Respondents by Gender

Woman Man



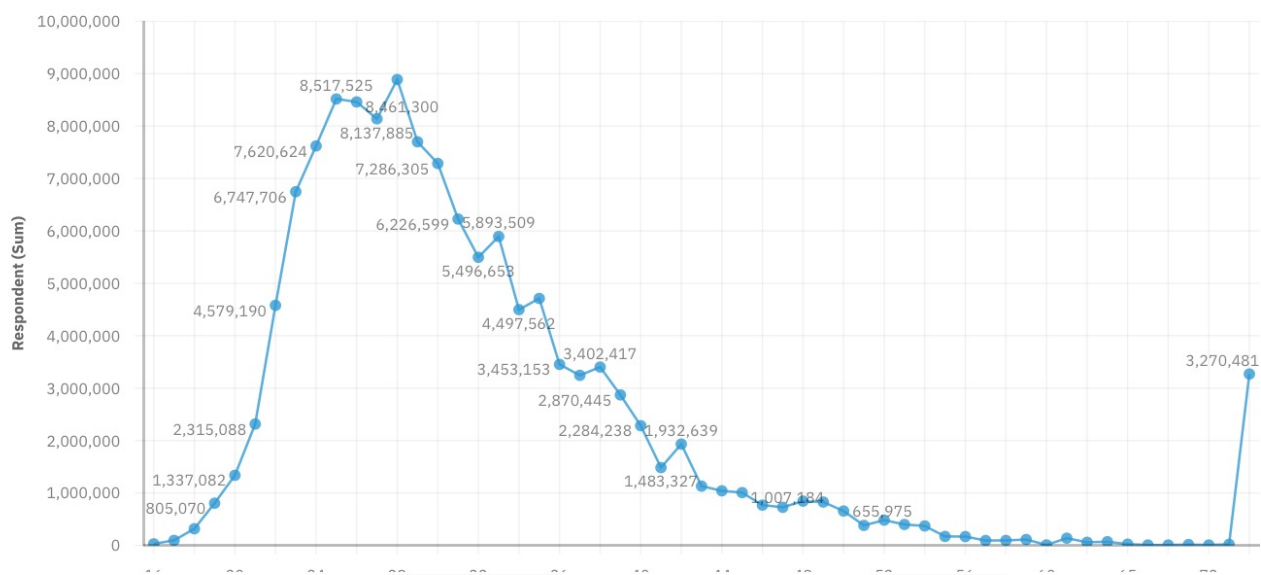
Response by Gender and Education

Man Woman

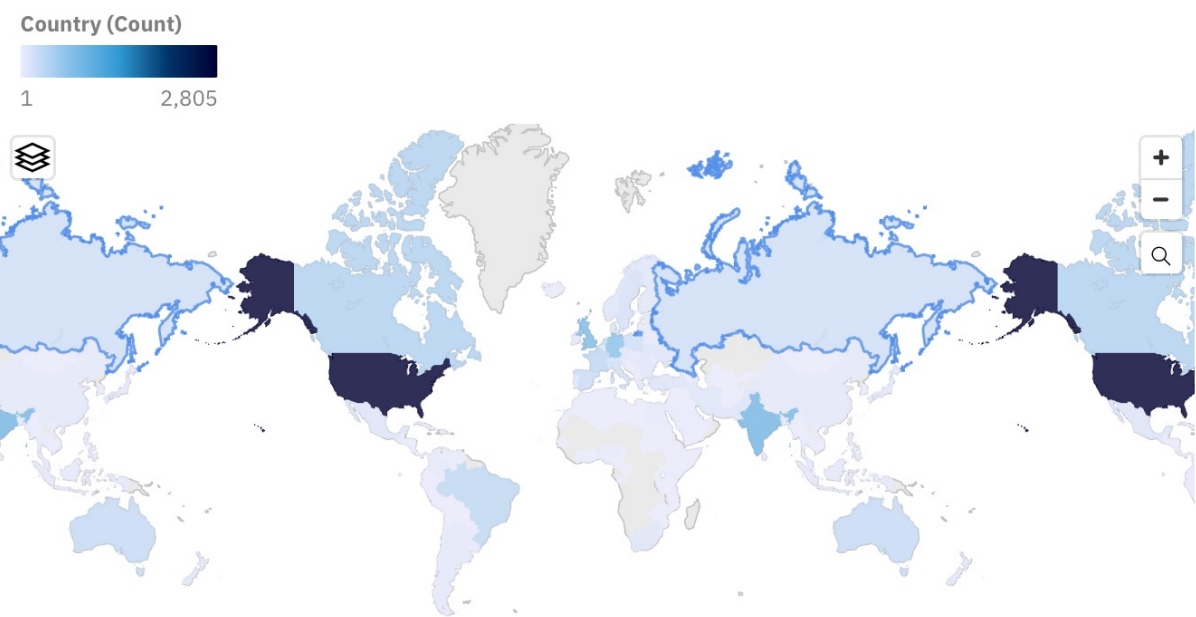


DASHBOARD – Demographics

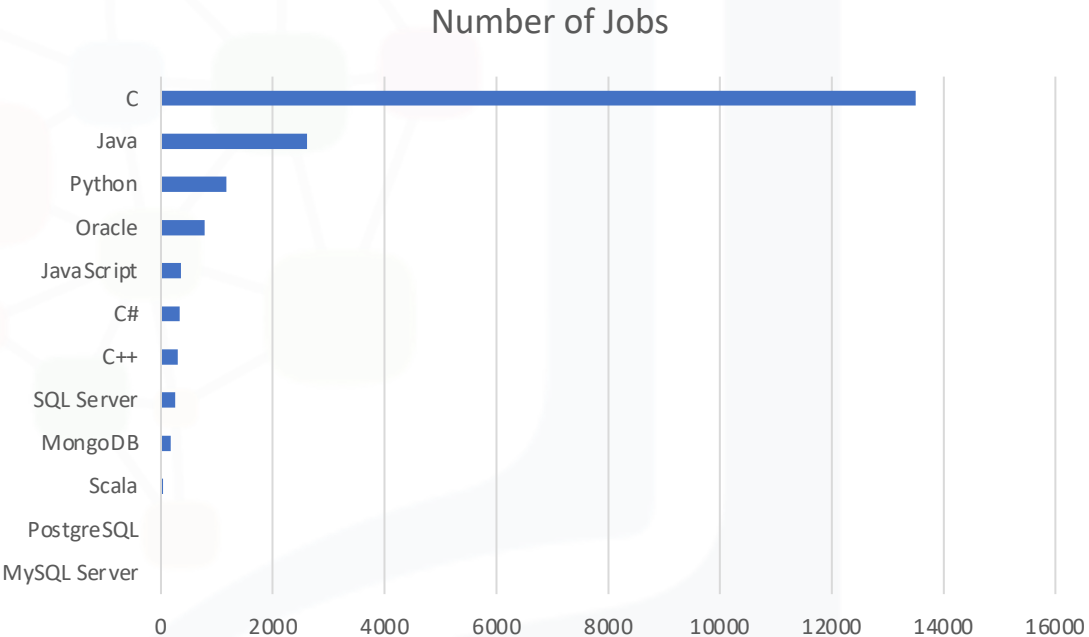
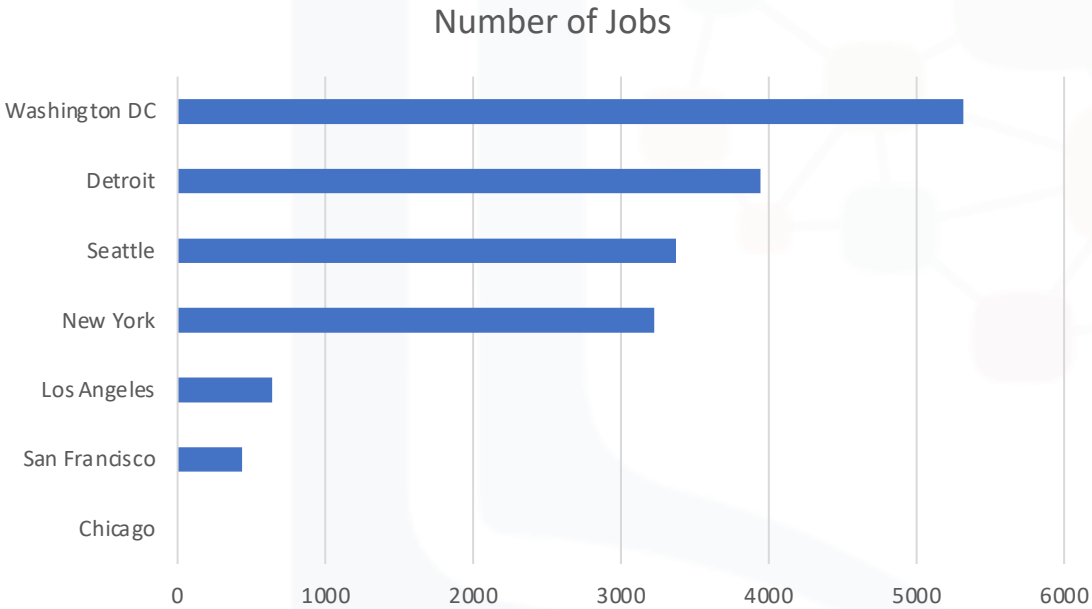
Response by Age



Response by Country



GITHUB JOB POSTINGS



Salary of Popular Languages

