



Programming Trends

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OUTLINE



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EXECUTIVE SUMMARY



- Javascript, HTML/CSS, SQL, and Python are roughly the top in Programming Languages.
- MySQL remains in the top Databases, while PostgreSQL and MongoDB are trending for next year.
- Platforms as Web Frames tend to stay roughly the same for next year
- Overall demographics of respondents tend to be a male around the ages of 20-45.
- More than a quarter of respondents are from the United States (~27%).

INTRODUCTION



- In order to keep pace with changing technologies and remain competitive, our organization regularly analyzes data to help identify future skill requirements. As a Data Analyst, my task is to collect data from various sources and identify trends for this year's report on emerging skills.
- First, I collected the top programming skills that are most in demand from various sources including:
 - Job postings
 - Training portals
 - Surveys
- Once enough data was collected, I began analyzing the data and identify insights and trends that may include the following:
 - What are the top programming languages in demand?
 - What are the top database skills in demand?
 - What are the popular IDEs?

METHODOLOGY



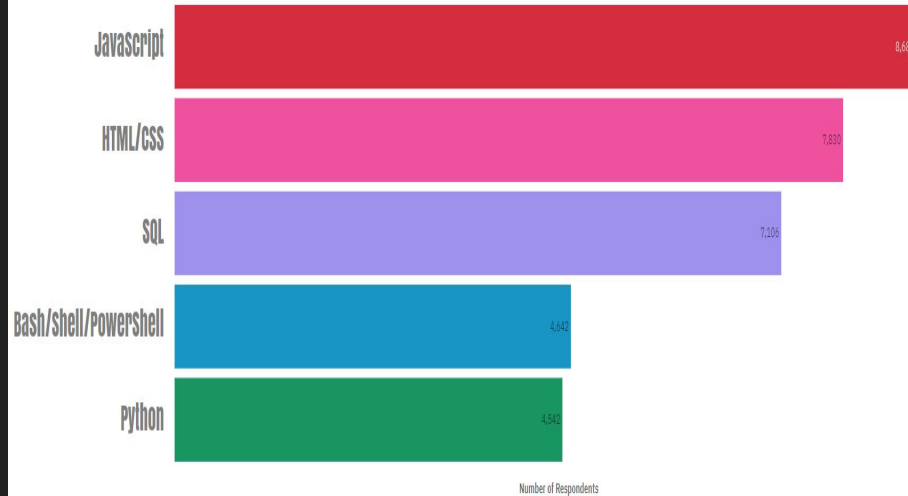
- The dataset used in this report comes a modified subset from the following source:
<https://stackoverflow.blog/2019/04/09/the-2019-stack-overflow-developer-survey-results-are-in/> under a [ODbL: Open Database License](#).
- The data was made ready for analysis using data wrangling techniques.
- When the data was ready, statistical techniques were applied to analyze the data.
- All of the information was then brought together by using IBM Cognos Analytics to create a dashboard.

RESULTS

PROGRAMMING LANGUAGE TRENDS

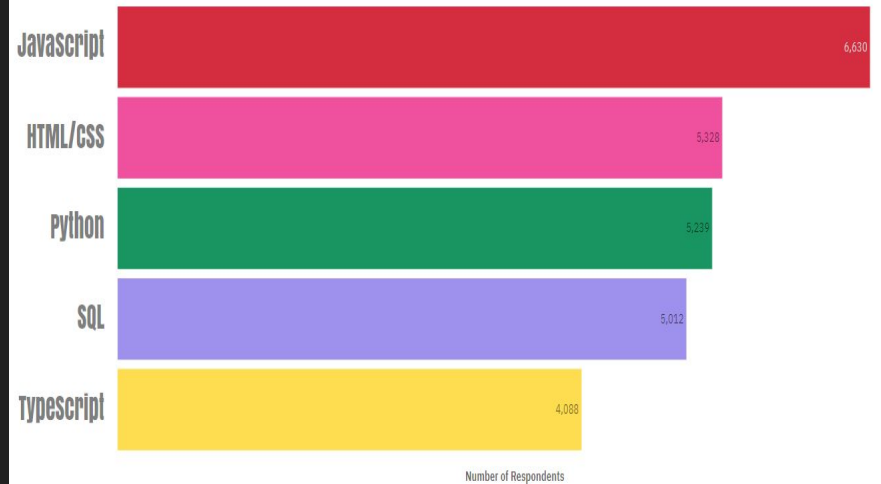
Current Year

Top 5 Currently Used Programming Languages



Next Year

Top 5 Desired Programming Languages



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Javascript is the currently the most popularly used and desired programming language,
- HTML/CSS is currently the second most popular and desired programming language.
- While python is currently the 5th used programming language, is it also the 3rd most desired for next year.
- While Bash/Shell/Powershell is in the top 5 currently used languages, it is not in the top 5 for desired languages for next year.

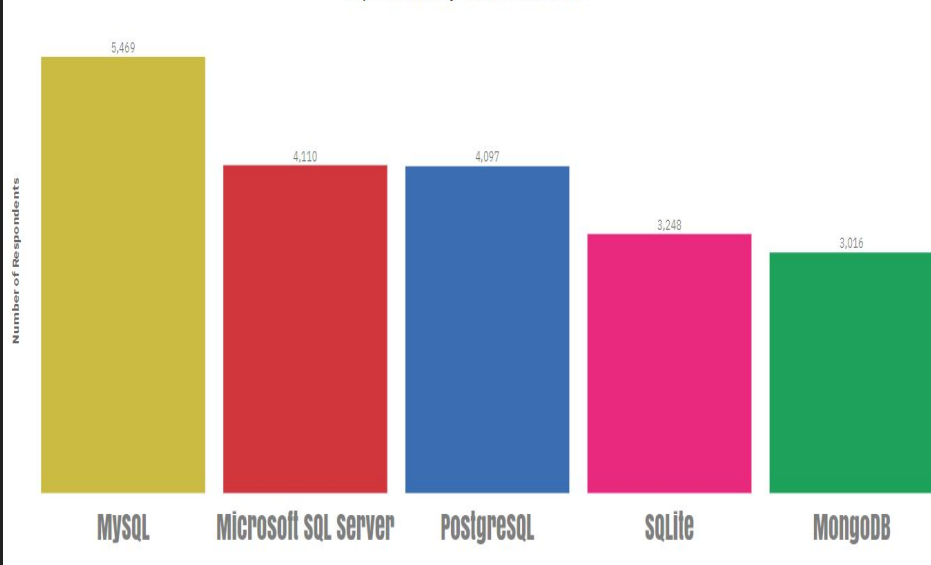
Implications

- Javascript shall remain as the top in popularity
- HTML/CSS shall remain second as well
- Python is currently in the top 5 currently used programming languages and is gaining popularity for next year.
- Typescript is in the top 5 desired programming languages, which might replace Bash/Shell/Powershell.

DATABASE TRENDS

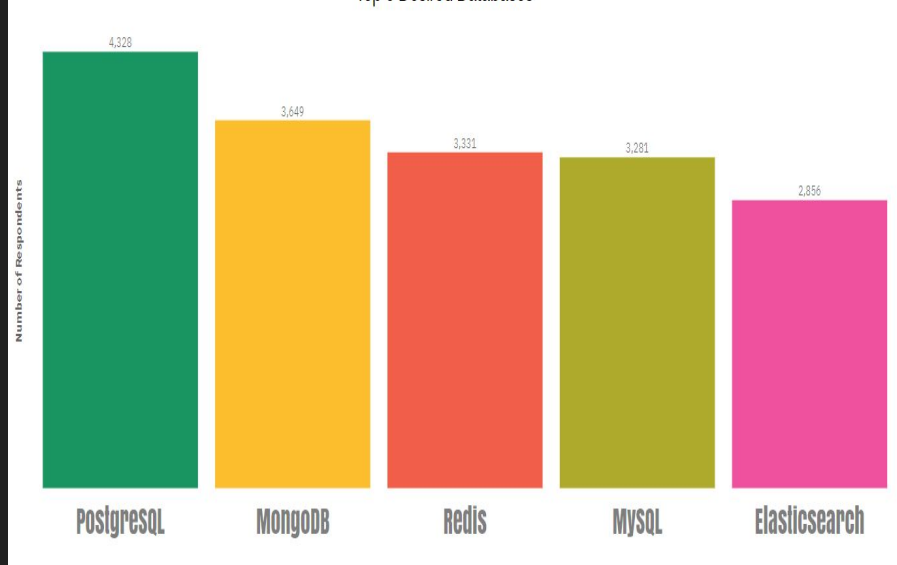
Current Year

Top 5 Currently Used Databases



Next Year

Top 5 Desired Databases



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- The currently most used database is MySQL.
- MySQL remains in the top 5 most desired databases for next year.
- PostgreSQL is the most desired database for next year, and is currently in the top 5 databases used.
- While MongoDB is currently the 5th most used database, it is the 2nd most desired database for next year.

Implications

- PostgreSQL is trending for next year
- MongoDB is also trending next year
- While MySQL is currently the most used, it might still be in the top 5 for next year
- Microsoft SQL Server and SQLite might not be in top 5 next year

DASHBOARD



<https://dataplatform.cloud.ibm.com/dashboards/6f83206d-bf7d-4934-a61d-6337eb3871f2/view/611dd8023e903fde49c2eae407912501783e765ab6bb8201d4807b495a657397a83c1494c87b4e588b120037fbbd115bcb>

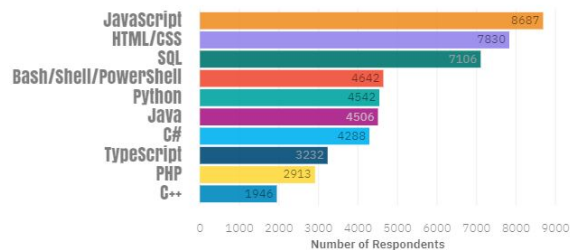
DASHBOARD TAB 1

Current Technology Usage

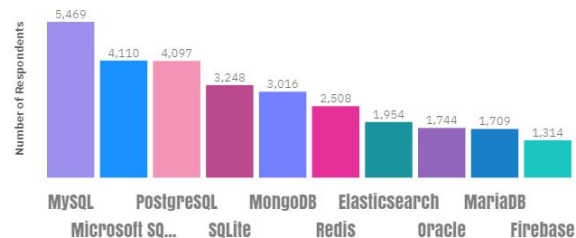
Future Technology Trend

Demographics

Top 10 Currently Used Programing Languages



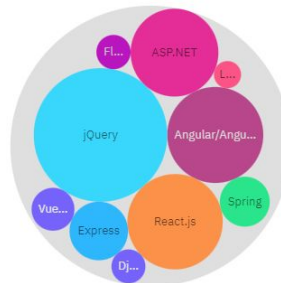
Top 10 Currently Used Databases



Platforms Respondents Worked With



Top 10 Web Frames



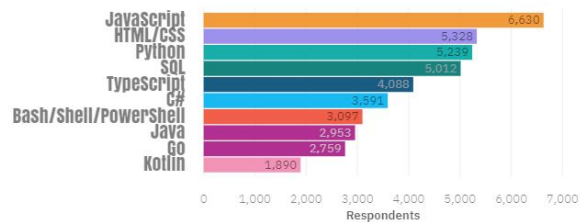
DASHBOARD TAB 2

Current Technology Usage

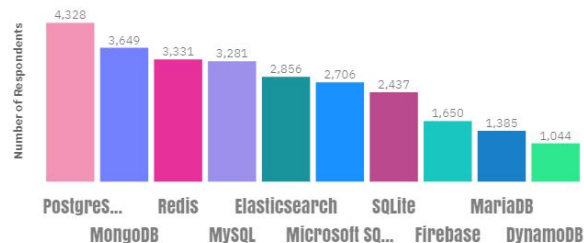
Future Technology Trend

Demographics

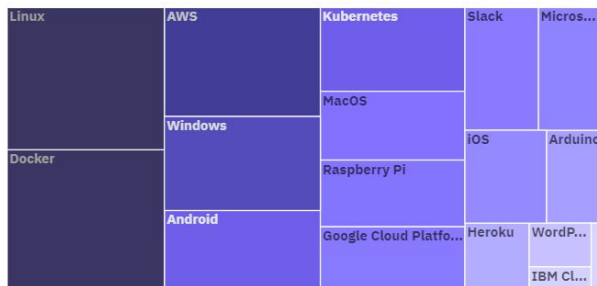
Top 10 Desired Programming Languages For Next Year



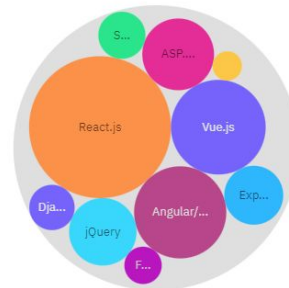
Top 10 Desired Databases For Next Year



Platforms Desired Next Year



Top 10 Web Frames Desired Next Year



DASHBOARD TAB 3

Current Technology Usage

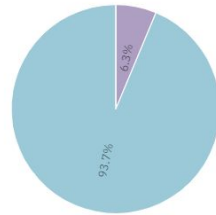
Future Technology Trend

Demographics

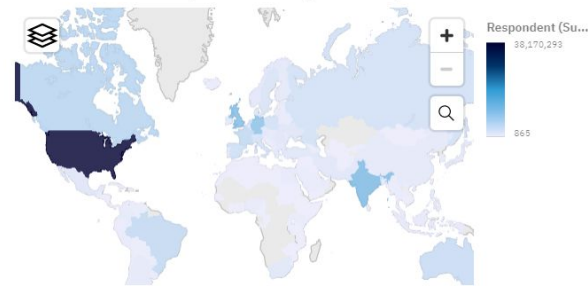
Gender of Resondents

gender

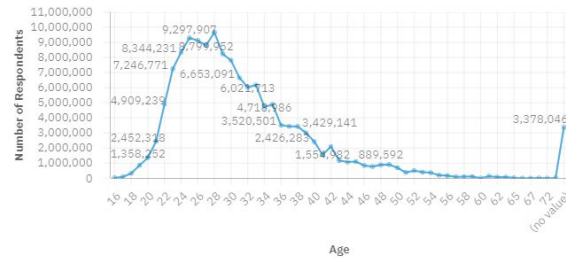
Woman Man



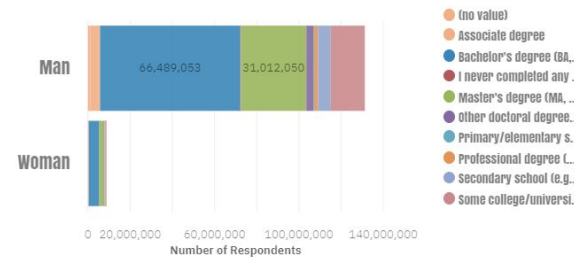
Respondents by Country



Number of Respondents by Age



Educations Levels of Respondents



DISCUSSION



Can u tell what the majority demographics of respondents were?

Compared to Programming Languages, do we see any trends for Platforms, and Web Frames?

OVERALL FINDINGS & IMPLICATIONS

Findings

- Most, but not all of the currently used technology remain at the top as the most desired languages
- Most respondents tend to be around ages 20 - 45
- ~93.7% of respondents were male.
- More than a quarter are from the United States (~27%).

Implications

- While most programming languages, databases, platforms, and web frames are currently used, they may not be the most desired for next year
- Overall demographics of respondents tend to be around ages 20 - 45
- Respondents mostly male (~93.7%)
- Majority of respondents, roughly more than a quarter are from the United States (~27%).

CONCLUSION

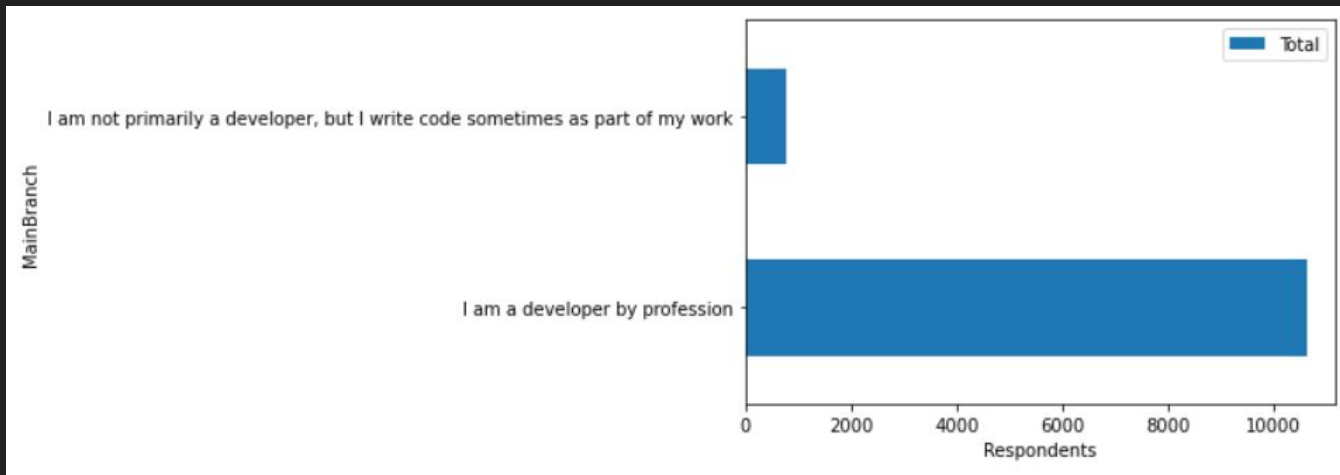


- Javascript, HTML/CSS, and SQL remain as the top in Programming Languages with Python gaining more popularity for next year.
- MySQL remains in the top Databases, while PostgreSQL and MongoDB are trending for next year.
- There's not much change in terms of Platforms and Web Frames as the top 5 currently used tend to stay the same for most desired for next year.
- The majority demographics of the industry tend to be a male around the ages of 20-45.

RECOMMENDATIONS

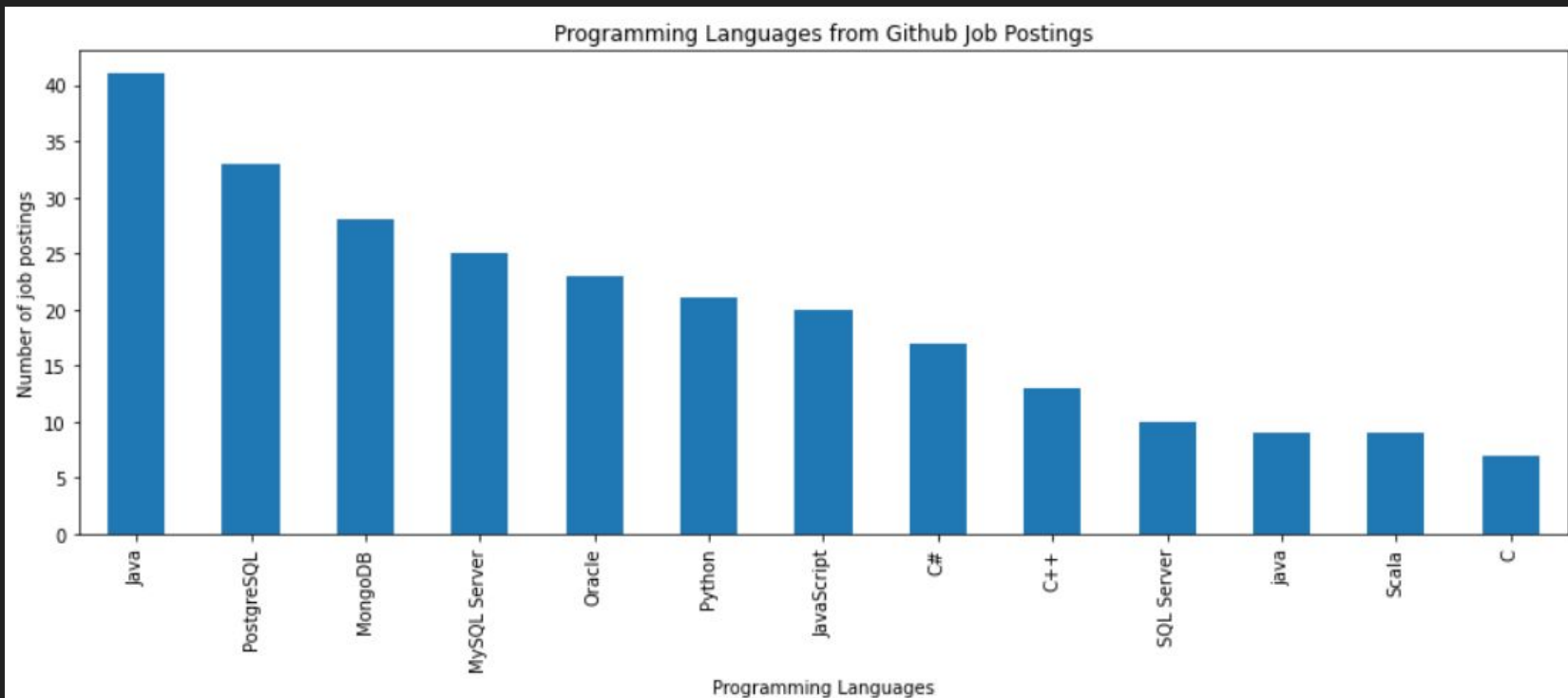
- In order to keep pace with changing technologies and remain competitive, our organization should adopt the trending programming language, Python.
- We should also implement a strategy in incorporate the PostgreSQL and MongoDB
- We can conduct another survey bi-annually to the target audience, males roughly the ages 20-45, to see how progress is.

APPENDIX



- Majority of Respondents tend to be a developer by profession

GITHUB JOB POSTINGS



POPULAR LANGUAGES

