




The 2019 Stack Overflow Developer Survey Results Are In

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9 JULY 2022

OUTLINE

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

EXECUTIVE SUMMARY



Company details with its survey and goals

Methodology Description

- Data collection and cleaning
- Data analysis
- Data visualization

Result presentation with charts of trends

Discussion and depth regarding of each database declared in results

Dashboard presentation of all trends with demographics

Conclusion of each research



INTRODUCTION

- Stack Overflow's annual Developer Survey is the largest and most comprehensive survey of people who code around the world
- But the results don't represent everyone in the developer community evenly.
- We'll make the anonymized results of this year's survey publicly available under the Open Database License ([ODbL](#)) in May.
- To address these characteristics of our survey sample, we often summarize results by
 - Country
 - Gender
- highlight results for underrepresented racial/ethnic group and use survey weighting to correct for demographic skew.

METHODOLOGY



Data collection

- Collecting Data using APIs
- Collecting Data using Web Scraping

Data Wrangling

- Finding and removing Duplicates
- Finding and Imputing Missing Values
- Normalizing Data

Exploratory Data Analysis

- Analyzing Data Distribution
- Hanging Outliers
- Correlations

Data Visualization

- Visualizing Distribution of Data
- Finding Relation using different types of graphs and comparing them

Dashboards Cognos

RESULTS

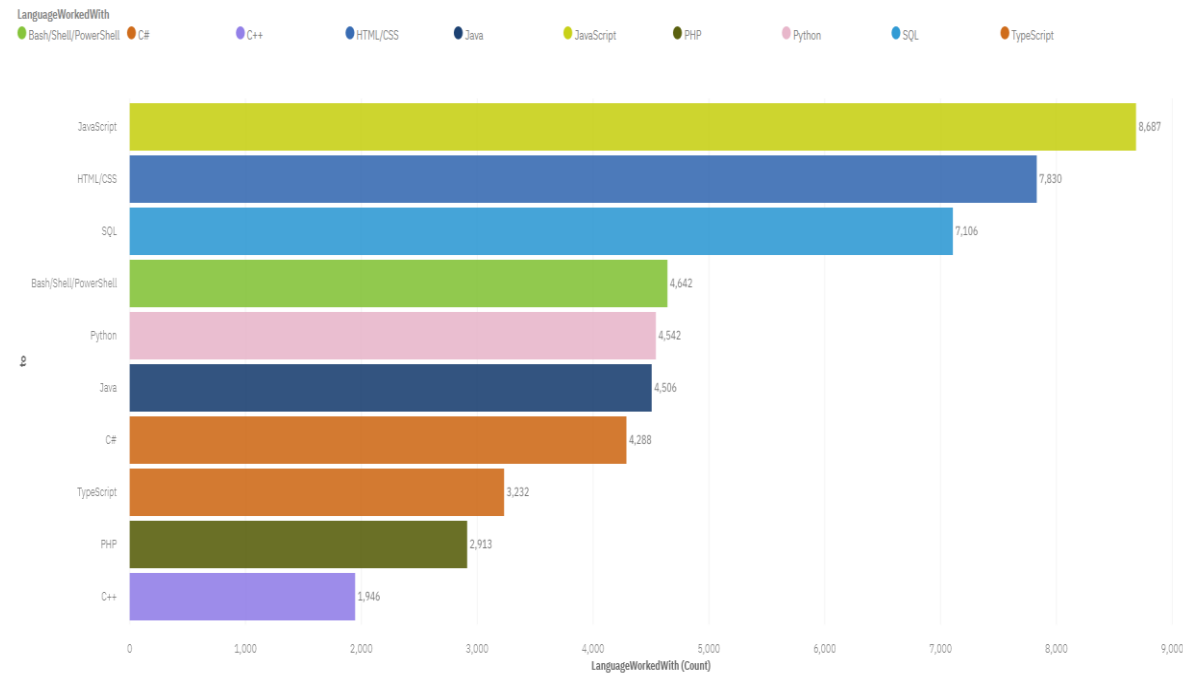
- **Creating visualizations using the developer survey data. The visualizations highlight the distribution of data, relationships between data, the composition of data, and comparison of data.**
- **Creating dashboards using IBM Cognos Analytics .**
- **Dashboards will contain data analysis, which should be intuitive and allow for the drill-down of data.**

PROGRAMMING LANGUAGE TRENDS

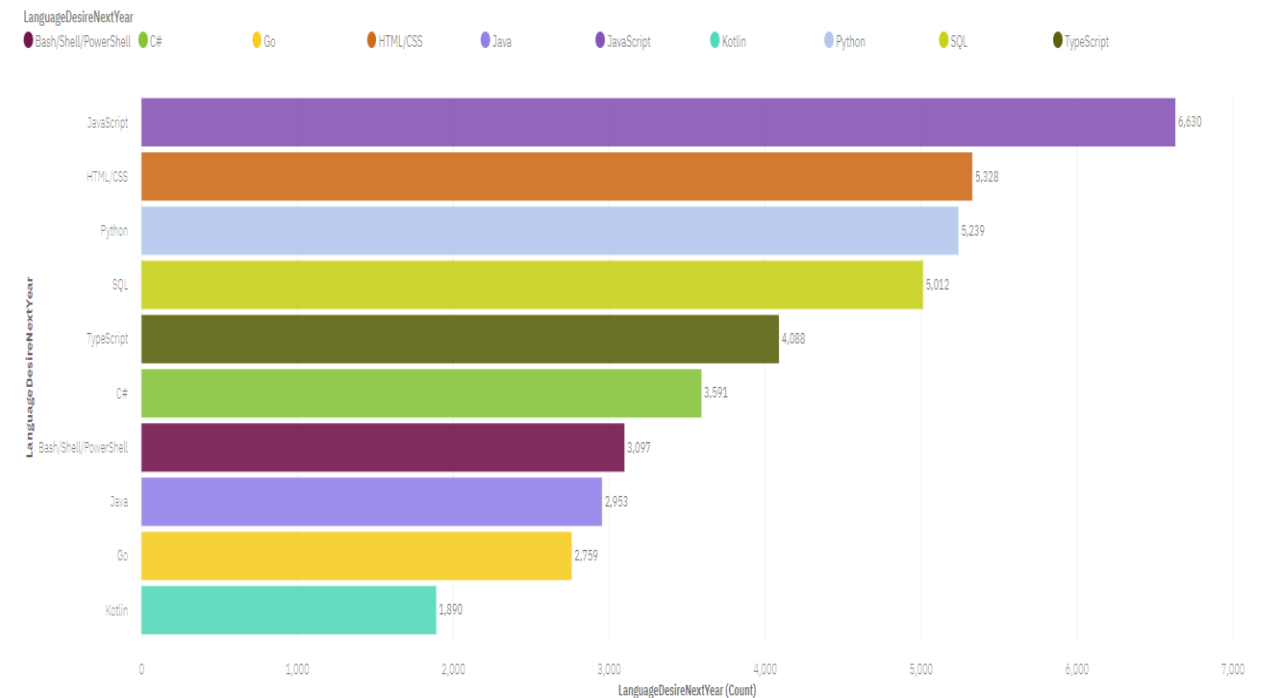
Current Year

Next Year

Top 10 languages used in this year



Top 10 Language Desire Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript is the most leading programming language
- Python, the fastest-growing major programming language
- Interest in TypeScript

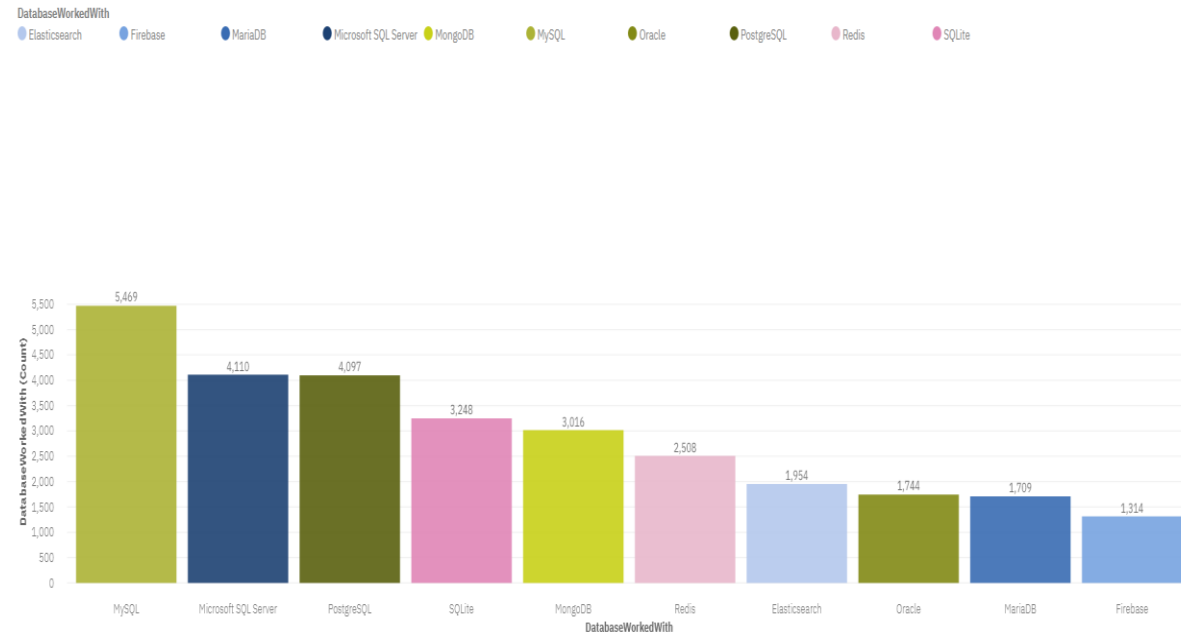
Implications

- Python is the Future of the Programming World
- Shift of programmers from JavaScript to TypeScript

DATABASE TRENDS

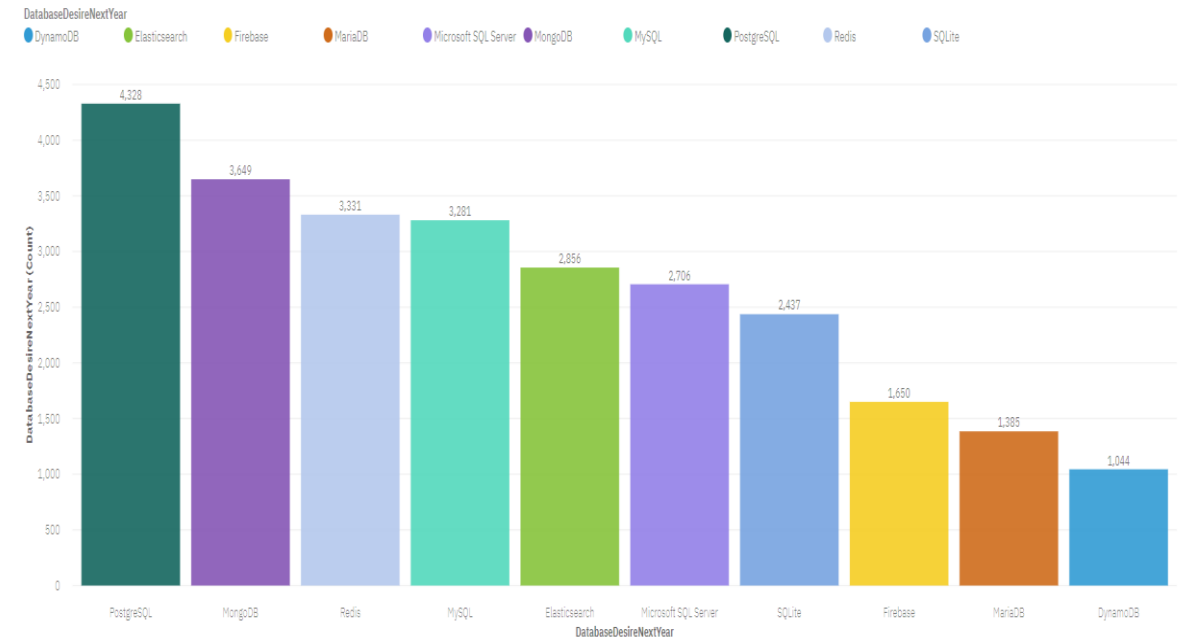
Current Year

Top 10 Database worked with this year



Next Year

Top 10 Database Desire Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is the most leading database
- Increase interest in MongoDB and PostgreSQL
- Decrease in passion towards Microsoft Server and SQLite

Implications

- PostgreSQL and MongoDB will establish the future Database market
- MySQL losing its pinnacle in the market
- Microsoft Server and SQLite losing feats in the market



DASHBOARD

- <https://dataplatform.cloud.ibm.com/dashboards/0518a081-a7c1-429c-a6e8-a1cfa017a590/view/6c62d42a358f0b9243c1eee4079b7a527a3f7159babb8601d2817b490c617897f06c1296c87c4f5edf110167f6bd440bce>

DASHBOARD TAB 1

Bar

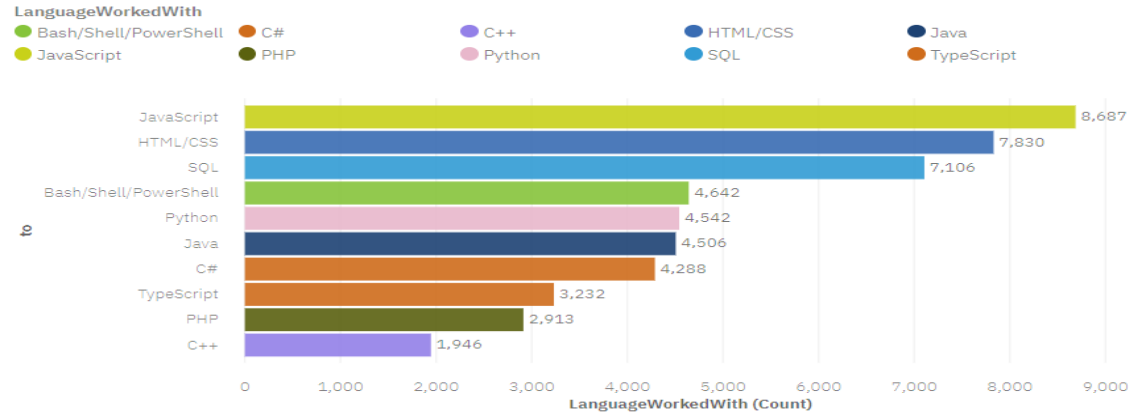
Filters

Current Technology Usage.-1

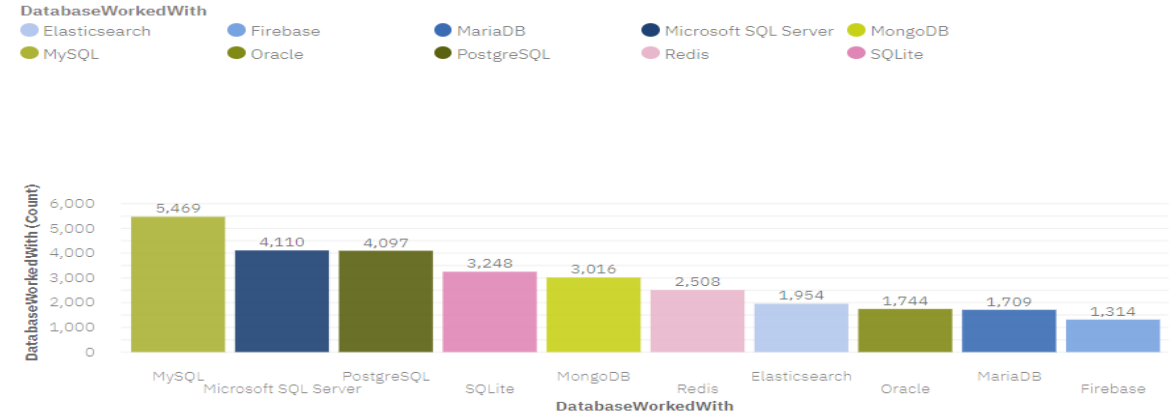
Future Technology Trend.

Demographics.

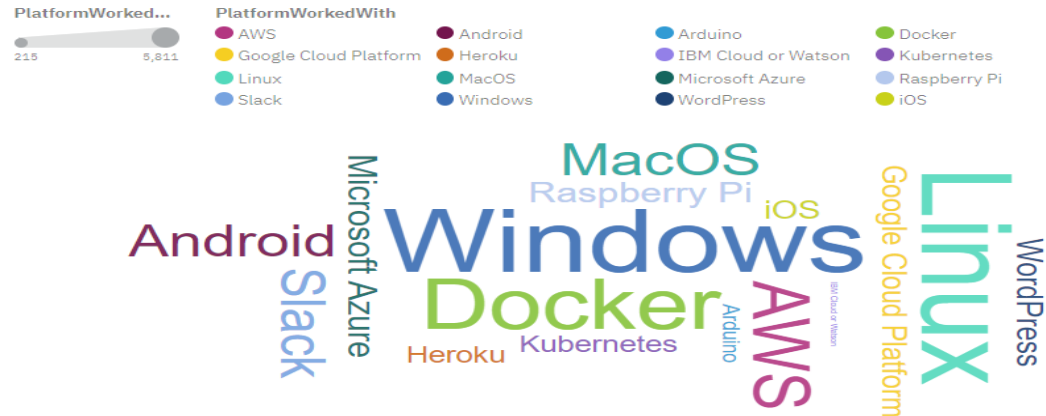
Top 10 languages used in this year



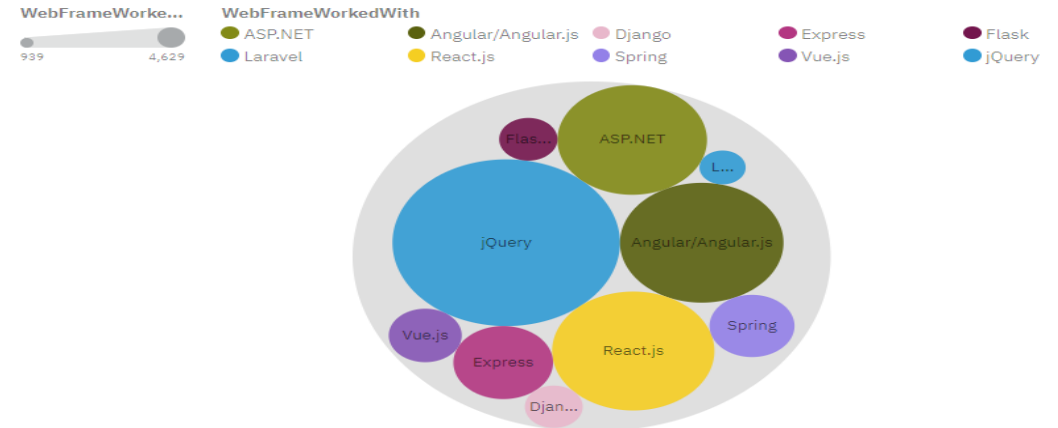
Top 10 Database worked with this year



Platform Worked With.



Top 10 WebFrame Worked With



IBM Developer

SKILLS NETWORK

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DASHBOARD TAB 2

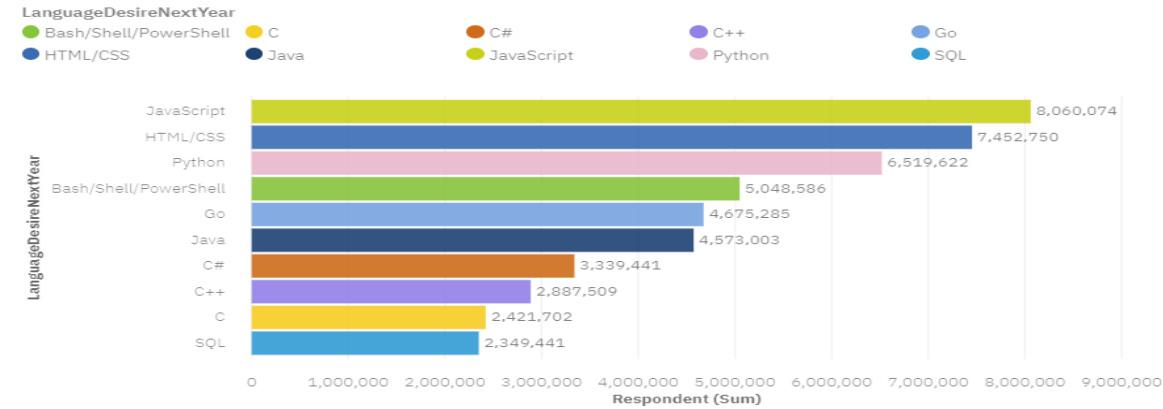
Filters

Current Technology Usage.-1

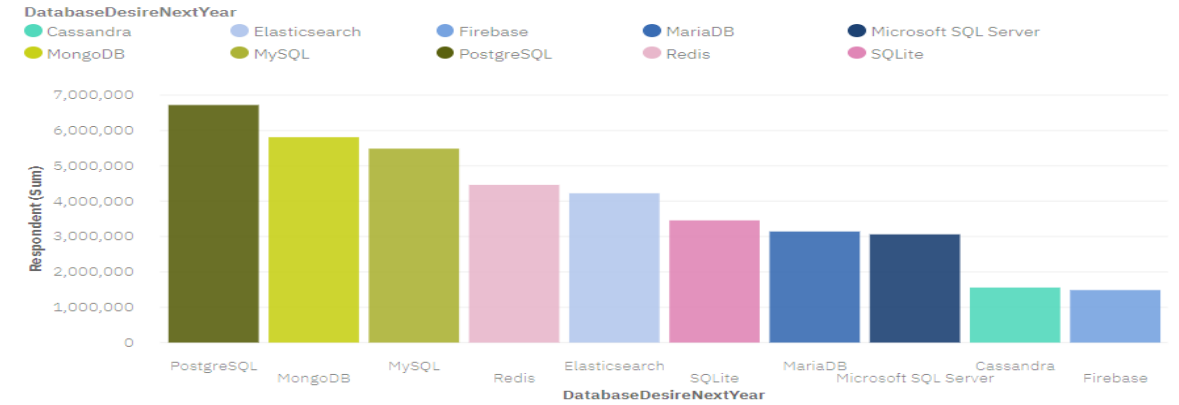
Future Technology Trend.

Demographics.

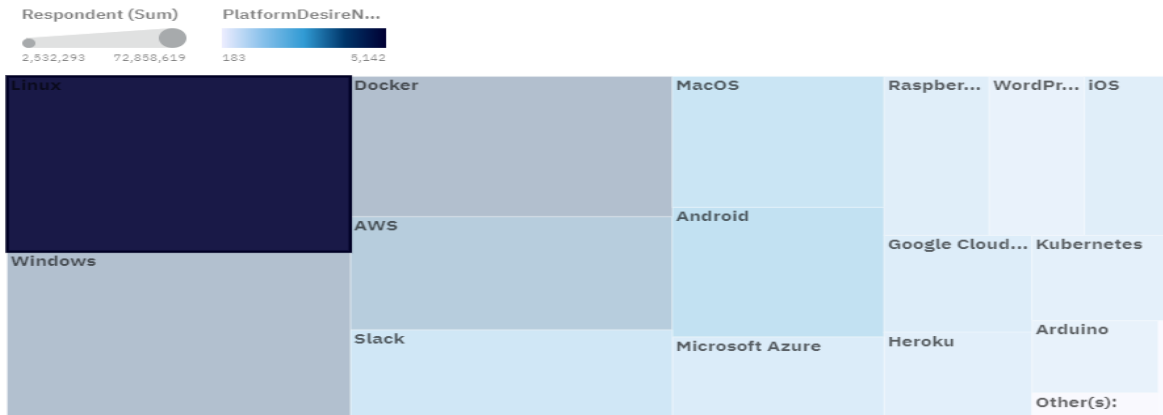
TOP 10 LANGUAGES DESIRED NEXT YEAR



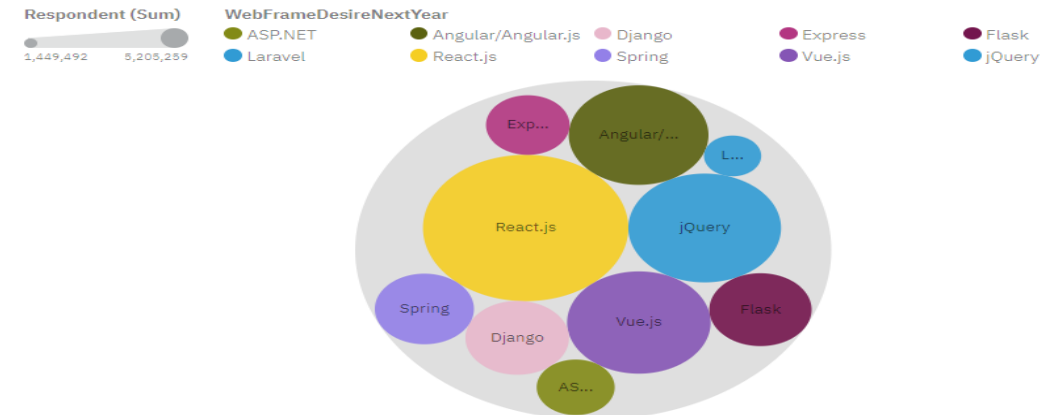
Top 10 Database Desire Next Year.



Platform Desire Next Year



Top 10 WebFrame Desire Next Year.



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IBM Developer

SKILLS NETWORK



DASHBOARD TAB 3

Pie

Filters

Current Technology Usage.-1

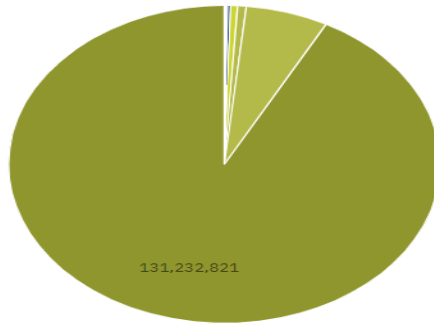
Future Technology Trend.

Demographics.

Respondent classified by Gender

Gender

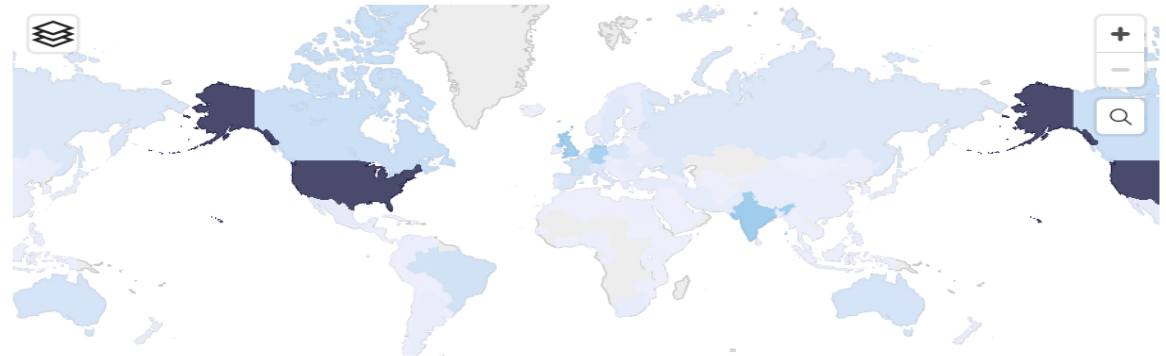
- Woman;Man;Non-binary, genderqueer, or gender non-conforming
- Woman;Non-binary, genderqueer, or gender non-conforming
- Man;Non-binary, genderqueer, or gender non-conforming
- Non-binary, genderqueer, or gender non-conforming
- Woman
- Man
- (no value)



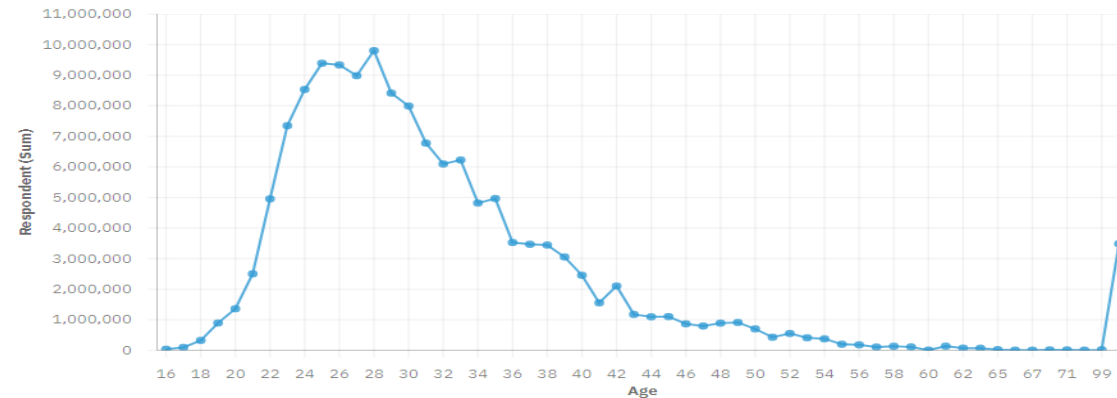
Respondent Distribution according to Countries

Respondent (Sum)

865 39,154,240



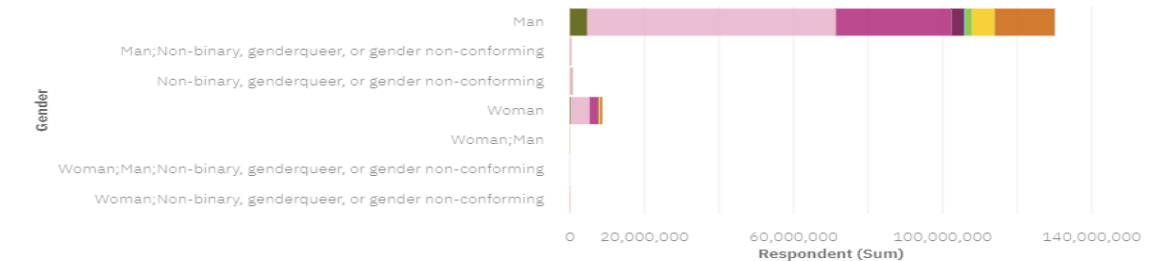
Respondent Classified by Age



Respondent on the basis of Gender, further classified by Formal Education Level

EdLevel

- Associate degree
- Bachelor's degree (BA, BS, B.E...)
- I never completed any formal ...
- Master's degree (MA, MS, M.E...)
- Other doctoral degree (Ph.D, E...
- Primary/elementary school
- Professional degree (JD, MD, e...
- Secondary school (e.g. Americ...
- Some college/university study ...



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DISCUSSION



OVERALL FINDINGS & IMPLICATIONS

Findings

- Python, the fastest-growing major programming language, has risen in the ranks of programming languages.
- 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.

Implications

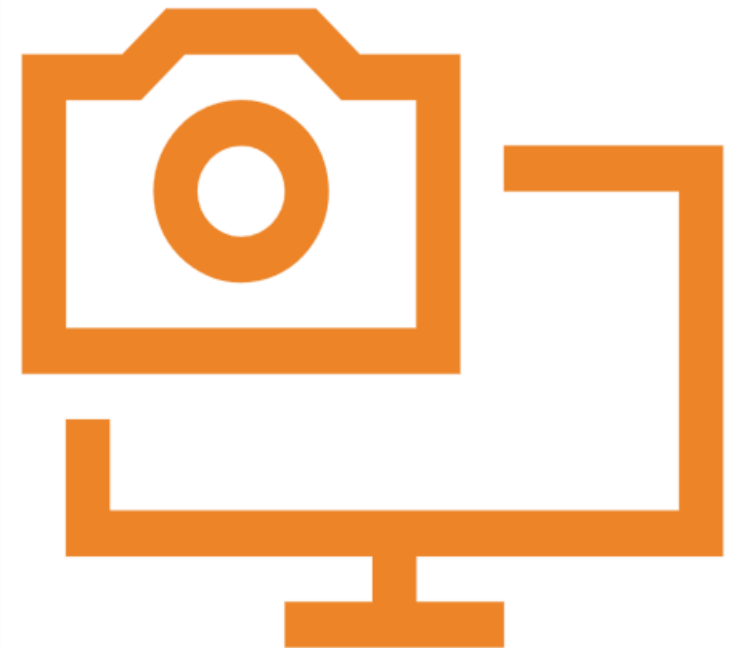
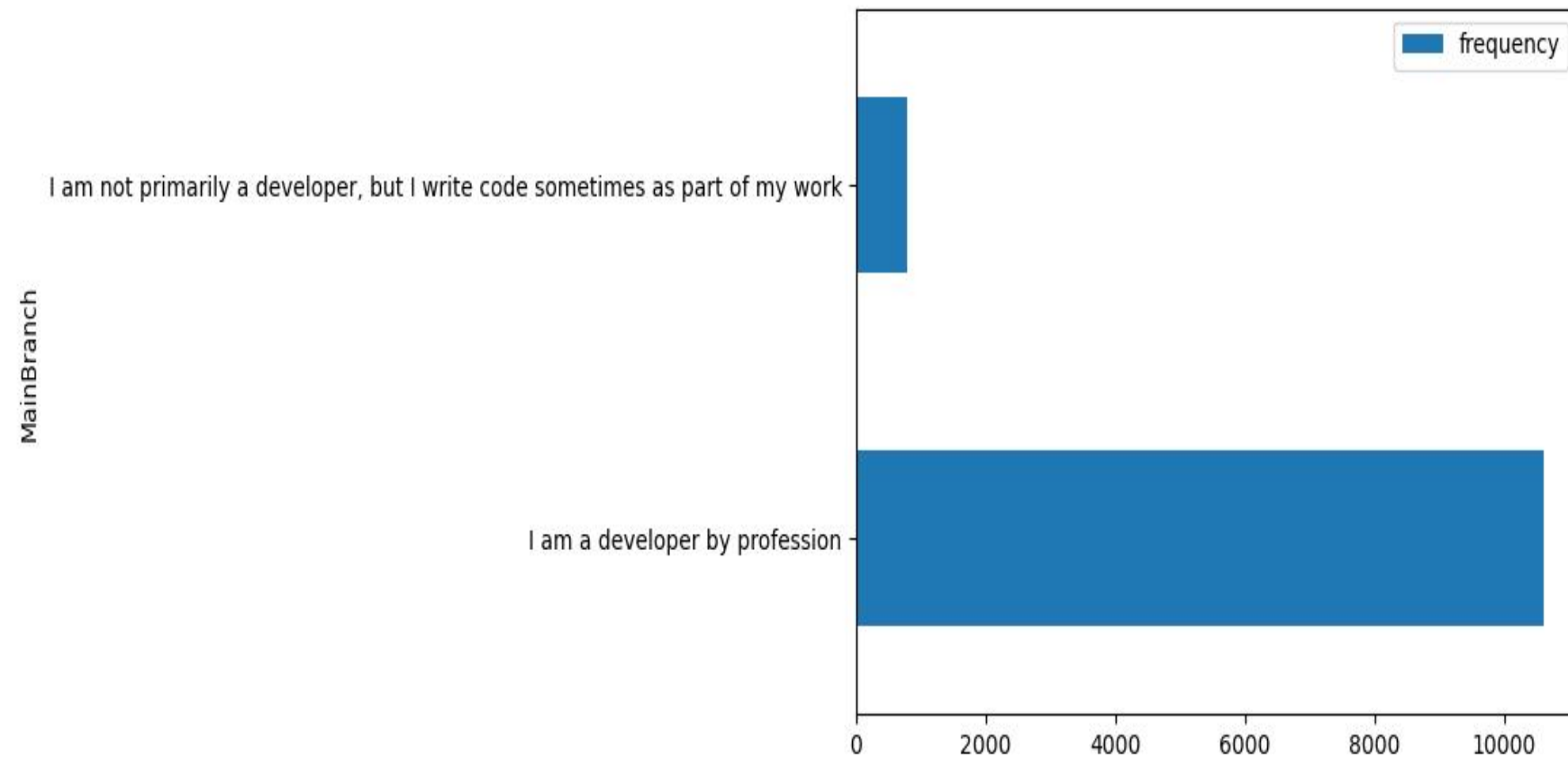
- More than 90% of young male especially with bachelor degree are leading the world to new coding era.
- Only developed countries are progressing towards development
- Linux will be ruling the platform for developers. Change in shift from windows to Linux is visible.
- JavaScript has gained huge programmers in both language and web frame fields.



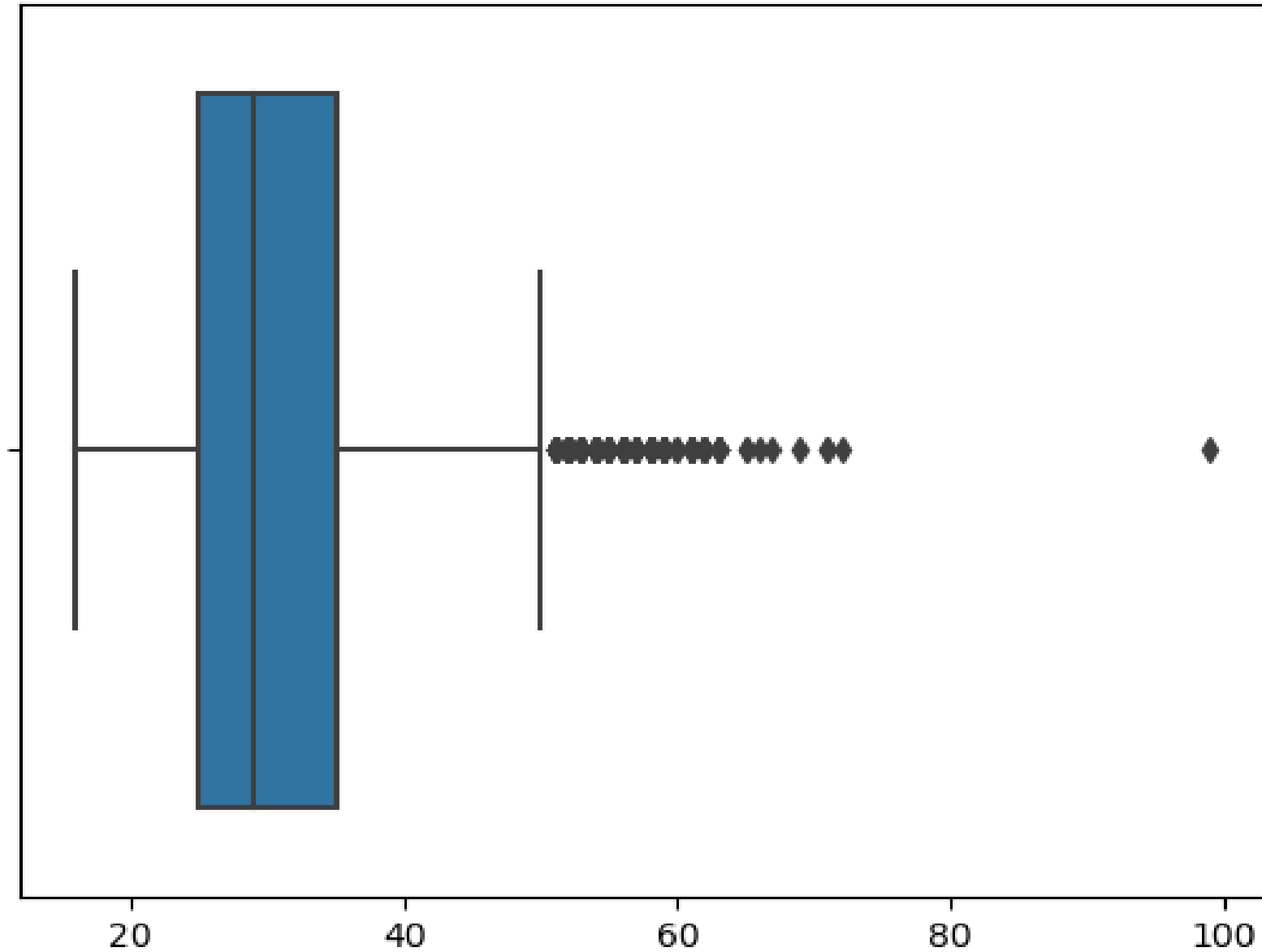
CONCLUSION

- Developed countries with its young male population of Bachelor Degree are setting up a wide platform for coding.
- US and India are going to become a huge coding hub with lots of innovation and development
- A good popularity of trends of languages , platform and web frames are obtained.
- Developing countries are in transition phase towards developer era.

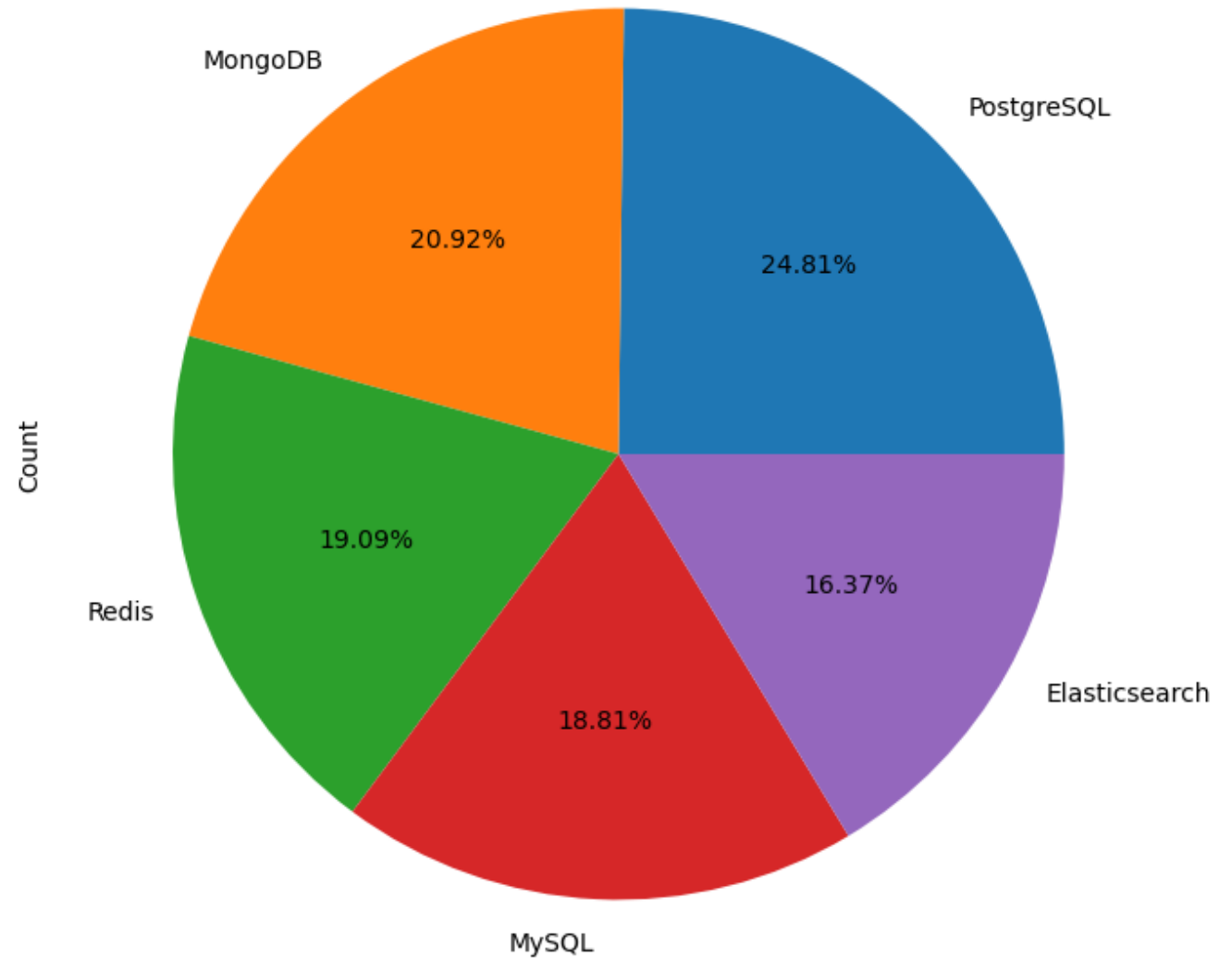
APPENDIX



Boxplot of Age

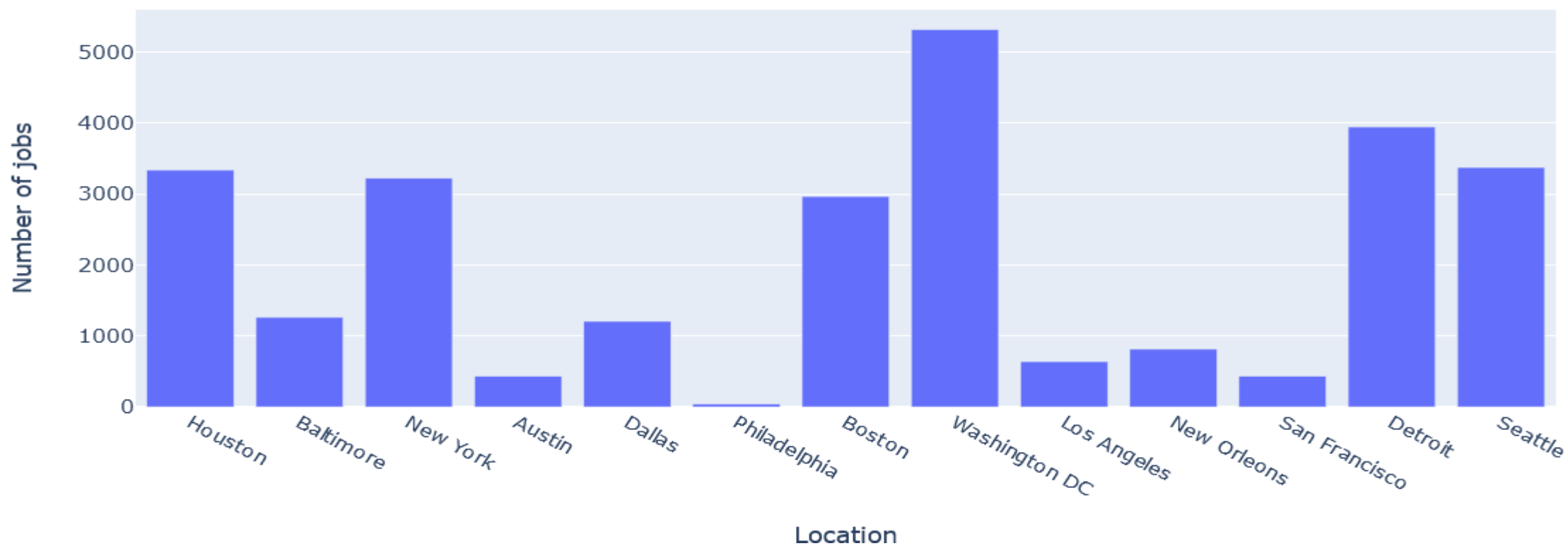


Pie chart of
the top 5
databases that
respondents
wish to learn
next year



JOB POSTINGS

job postings



POPULAR LANGUAGES

