



Technology Today and Trend

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OUTLINE



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EXECUTIVE SUMMARY



- This data analysis provides insights into current and future trends in:
 - programming languages
 - and databases.
- The analysis aims to:
 - Uncover key patterns
 - Identify the most used technology
 - Offer actionable recommendations for decision making.

INTRODUCTION



The purpose of this analysis is to identify current and future trends:

- programming languages
- and databases

It was based on survey data from industry professionals. The dataset was collected in 2019 through a Stack Overflow survey.

Key goals is identifying widely and rarely used technologies

METHODOLOGY



- Data Sources
 - M5_Survey_data_demographics.csv
 - M5_survey_data_technologies.csv
- Data Cleaning:
 - Removed inconsistencies and formatted numeric columns for analysis
- Exploratory Data Analysis(EDA):
 - Calculated descriptive statistics to understand data distribution.
 - Grouped and aggregated data for key metrics
- Visualization:
 - Created bar charts to highlight distribution of data
- Dashboards

RESULTS

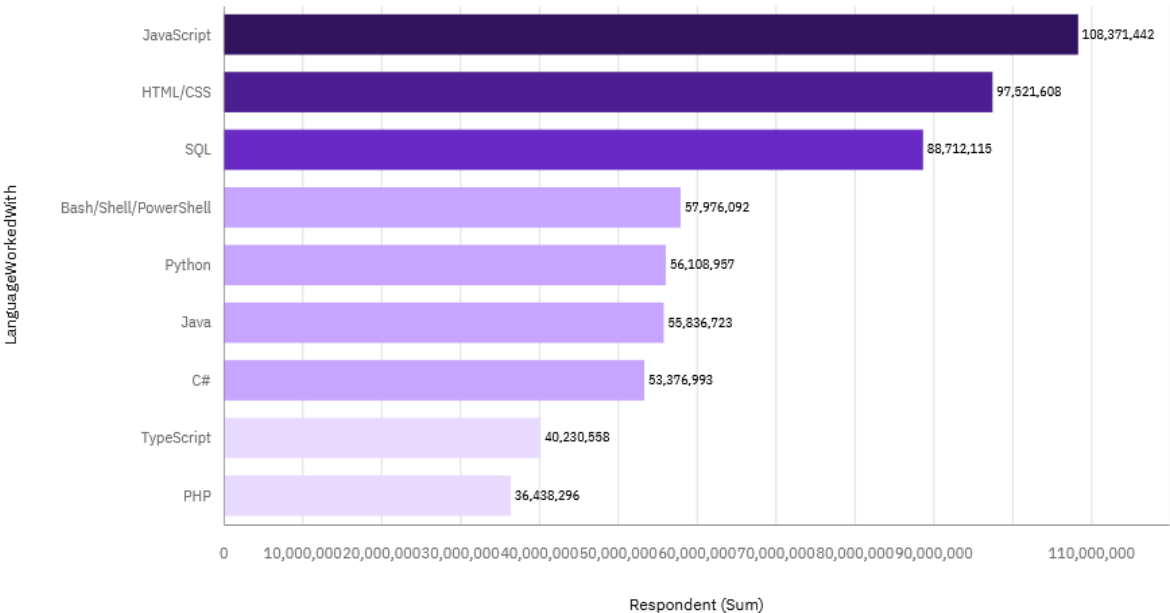
The analysis revealed:

- 14.5% of respondents use JavaScript regularly, making it the most widely used language.
- Python with 9.5% is the second most desired language for next year, showing growth potential.
- Among databases, MySQL remains dominant (17.5%), with PostgreSQL (13.1%) closely following.

PROGRAMMING LANGUAGE TRENDS

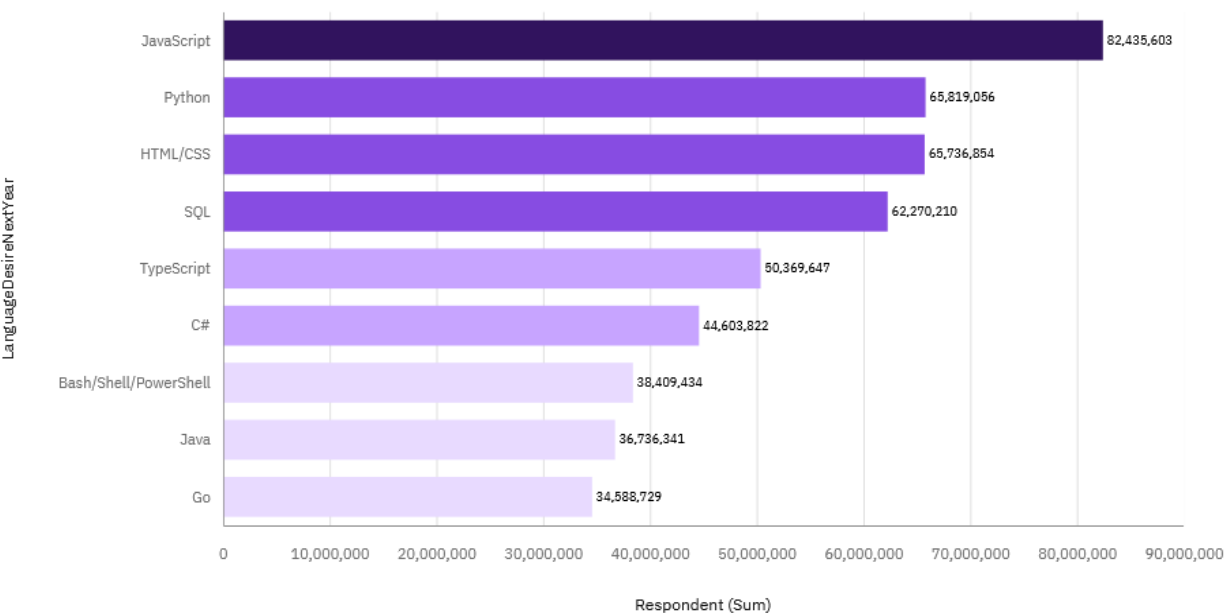
Current Year

Respondent and Top 10 Language Worked With



Next Year

Respondent and Top 10 Language Desire Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript most widely used language
- HTML/CCS and SQL rank 2nd and 3rd
- Python holds 5th position but growing.

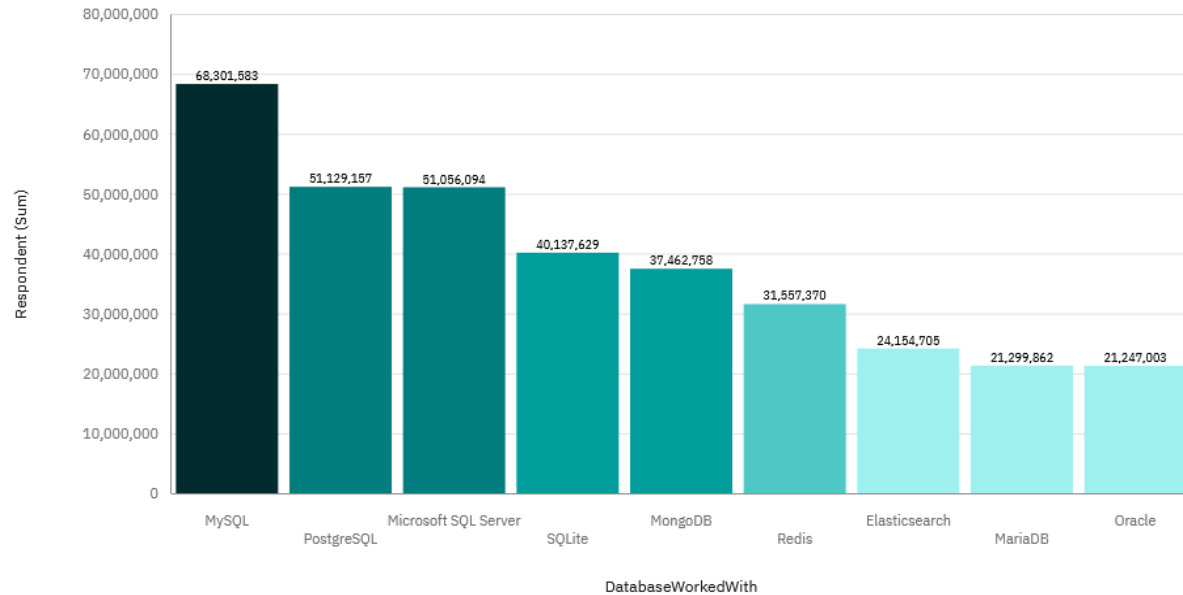
Implications

- JavaScript remains top desired language next year
- Python climbs to 2nd in desirability
- HTML/CSS and SQL stay essential for respondents.

DATABASE TRENDS

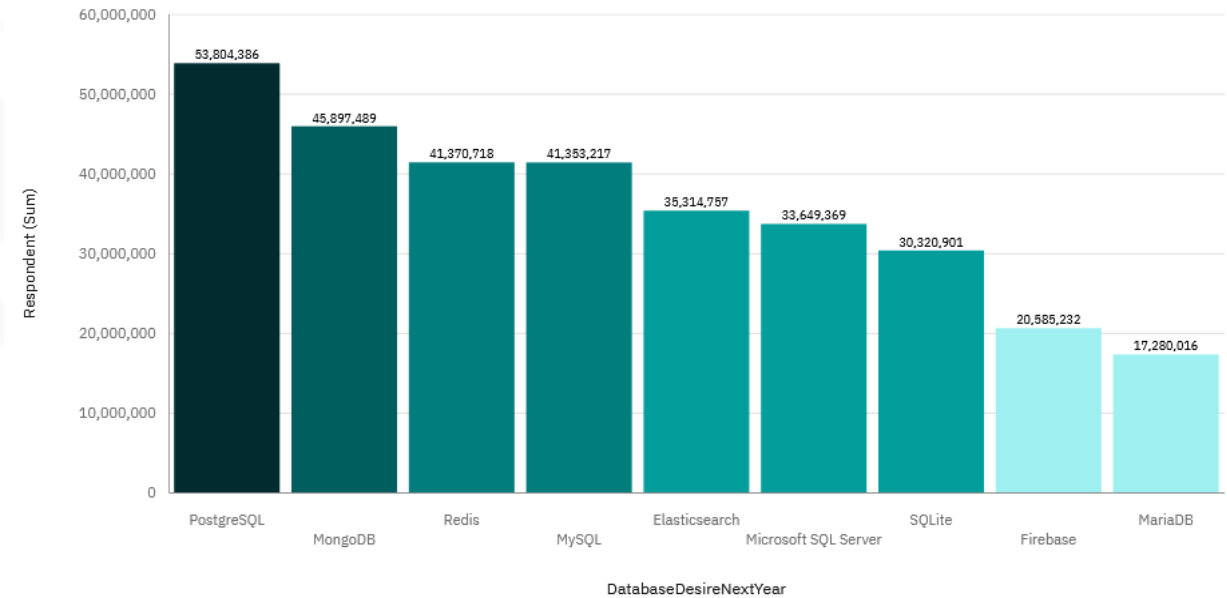
Current Year

Respondent and Top 10 Database Worked With



Next Year

Respondent and Top 10 Database Desire Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL most widely used database
- PostgreSQL and Microsoft SQL Server close 2nd and 3rd
- MongoDB holds 5th position

Implications

- PostgreSQL expected to lead trends next year
- MongoDB climbs to 2nd in desirability
- Microsoft SQL Server projected to drop to 6th position

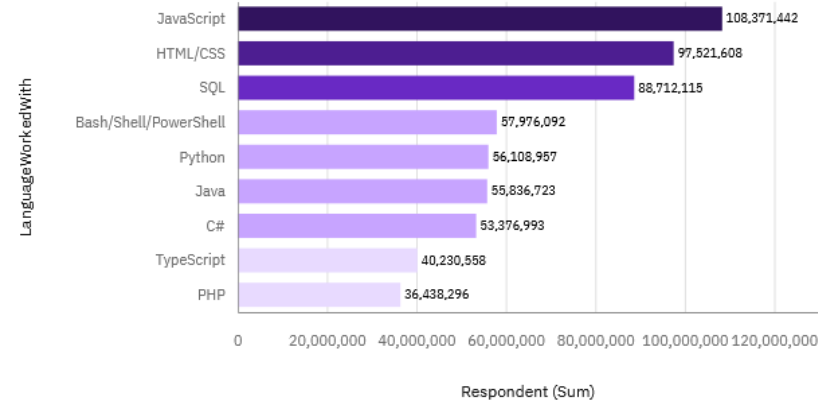
DASHBOARD



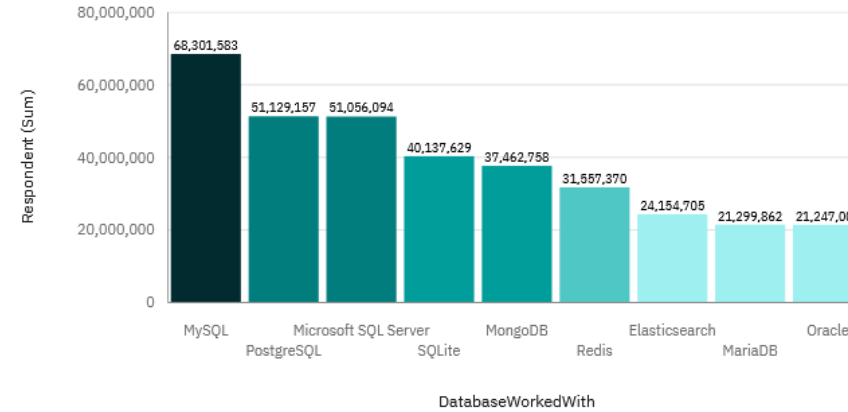
https://github.com/RennoDani/Dashboard_CourseraDataAnalytics

DASHBOARD - Current Technology Usage

Respondent and Top 10 Language Worked With



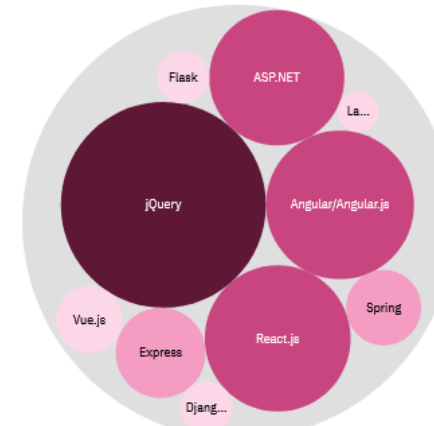
Respondent and Top 10 Database Worked With



Respondent and Platform Worked With

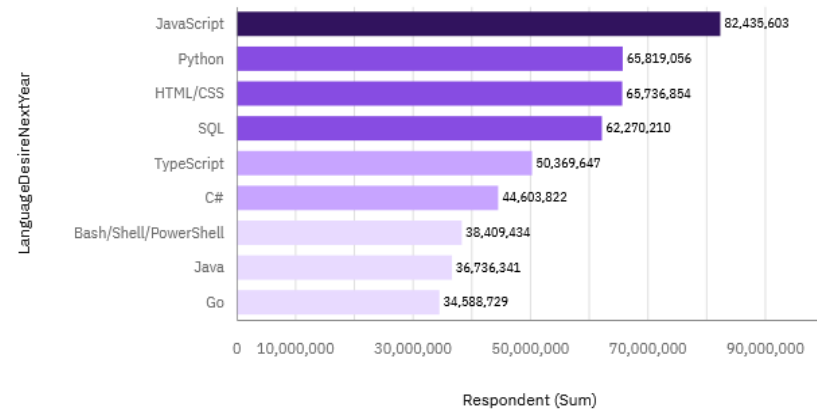


Respondent and Top 10 Web Frame Worked With

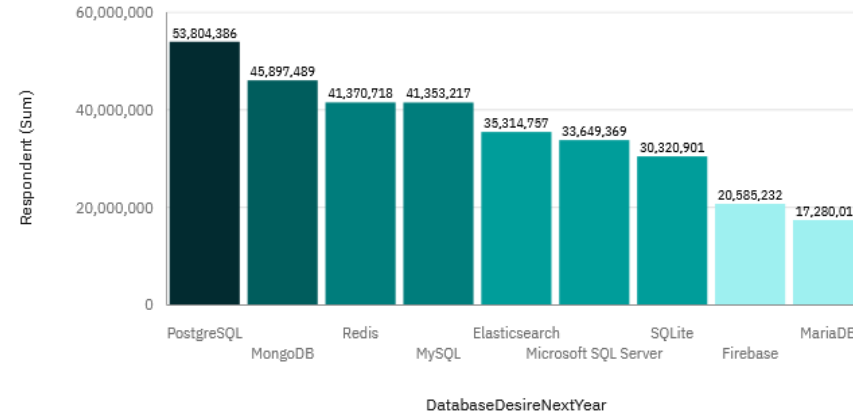


DASHBOARD - Future Technology Trend

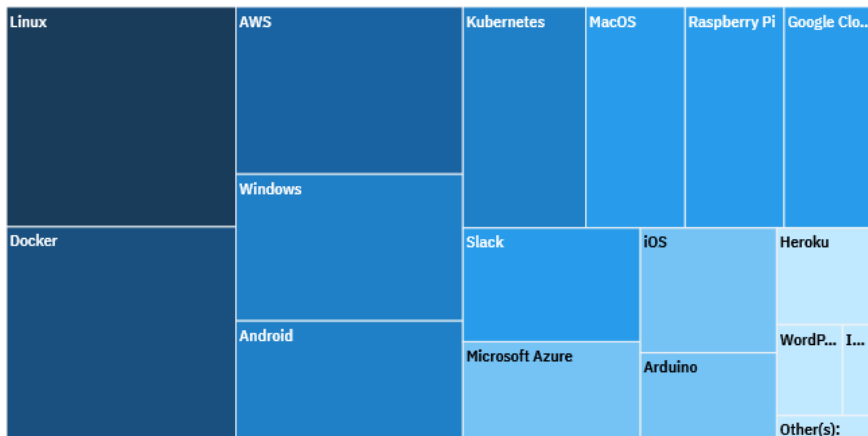
Respondent and Top 10 Language Desire Next Year



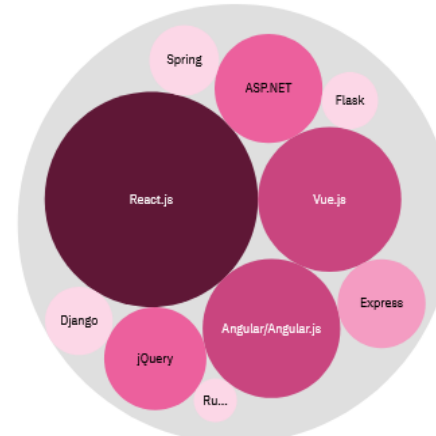
Respondent and Top 10 Database Desire Next Year



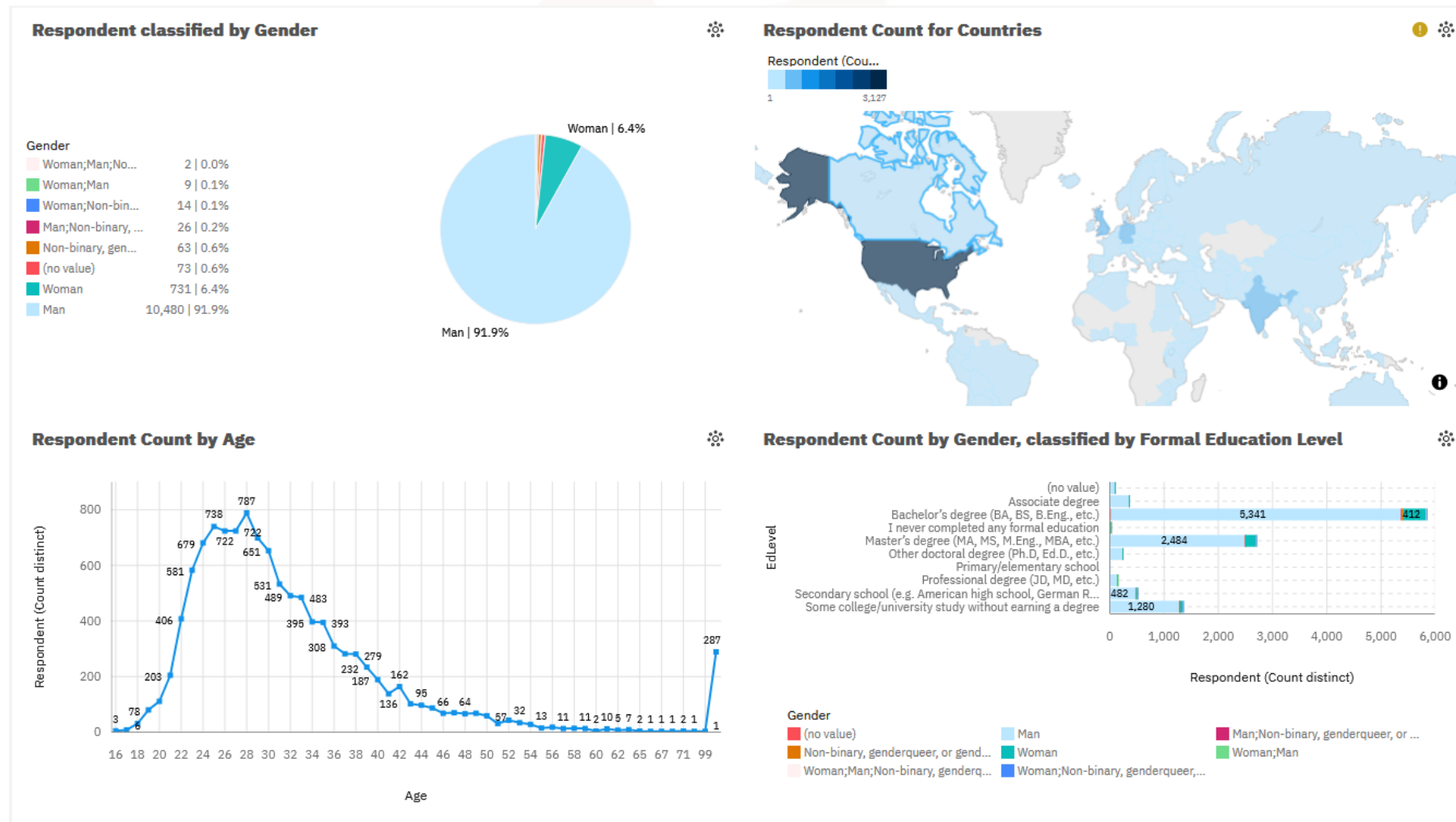
Respondent and Platform Desire Next Year



Respondent and Top 10 Web Frame Desire Next Year



DASHBOARD - Demographics



DISCUSSION



- The preference for Python aligns with the rise of AI and data science
 - but its position in traditional web development remains secondary.
- Similarly, the increase in PostgreSQL adoption may be linked to its advanced feature set
 - but further research is needed to confirm its impact on large-scale enterprise systems

OVERALL FINDINGS & IMPLICATIONS

Findings

- JavaScript most widely used language
- MySQL most widely used database
- MongoDB holds 5th position and climbs to 2nd in desirability

Implications

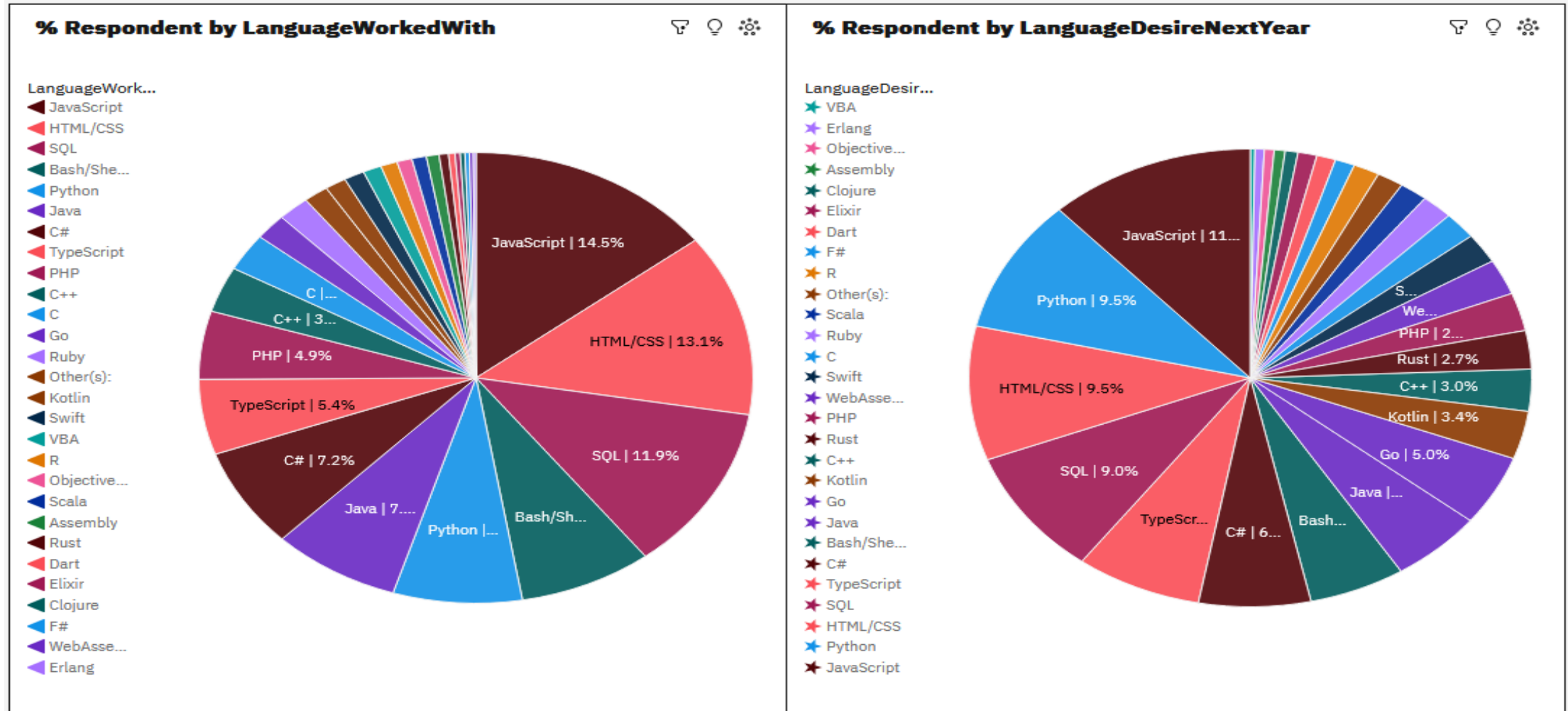
- HTML/CSS and SQL stay essential for respondents on the trends
- Python climbs to 2nd in desirability
- PostgreSQL close 2nd and expected to lead trends next year

CONCLUSION



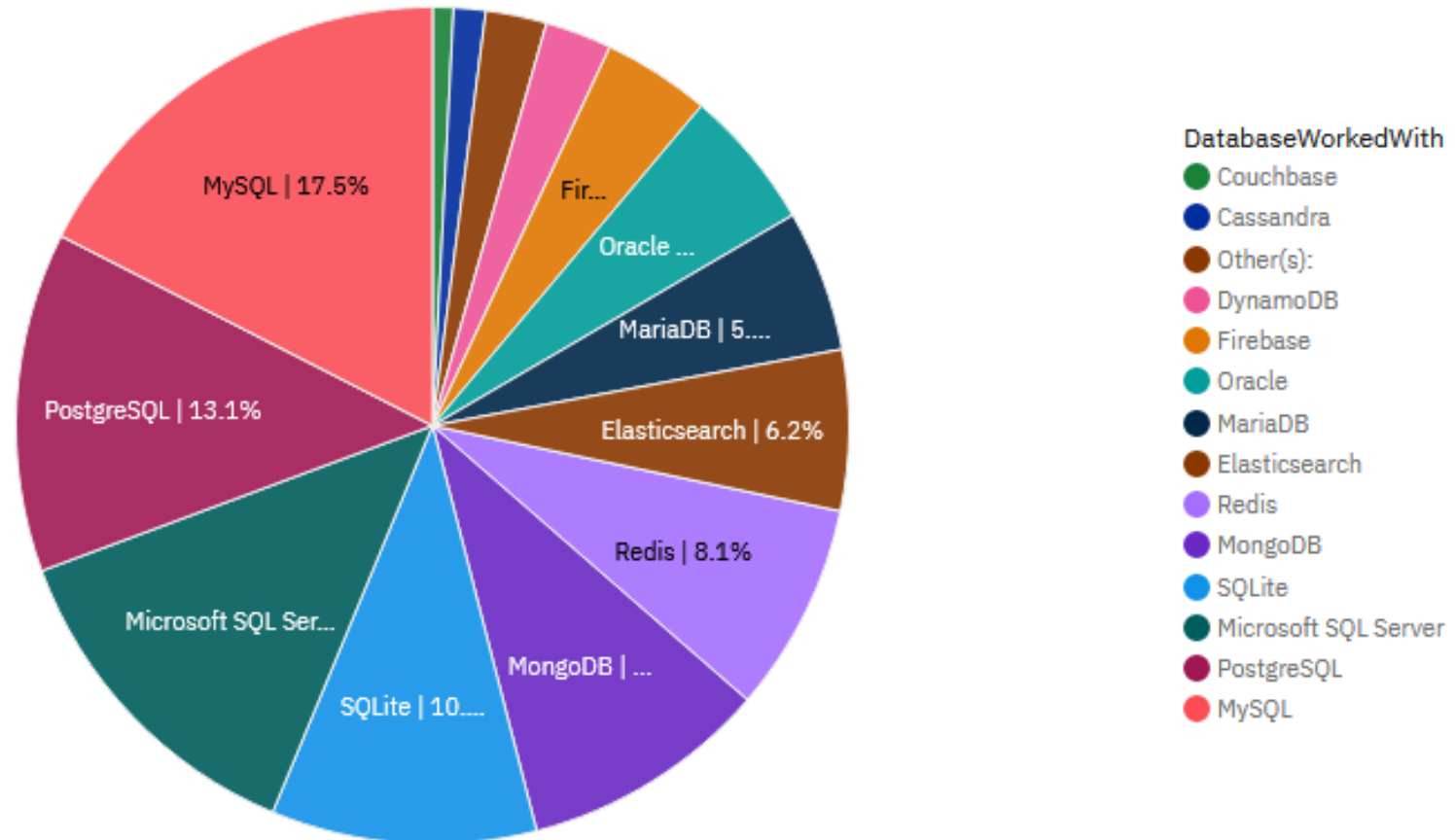
- In summary, organizations should prioritize Python and PostgreSQL training to align with market trends.
- Maintaining expertise in JavaScript and MySQL remains essential.
- Future research should focus on understanding regional preferences and emerging tools.
- The results indicate technological trends for continuous learning.

APPENDIX



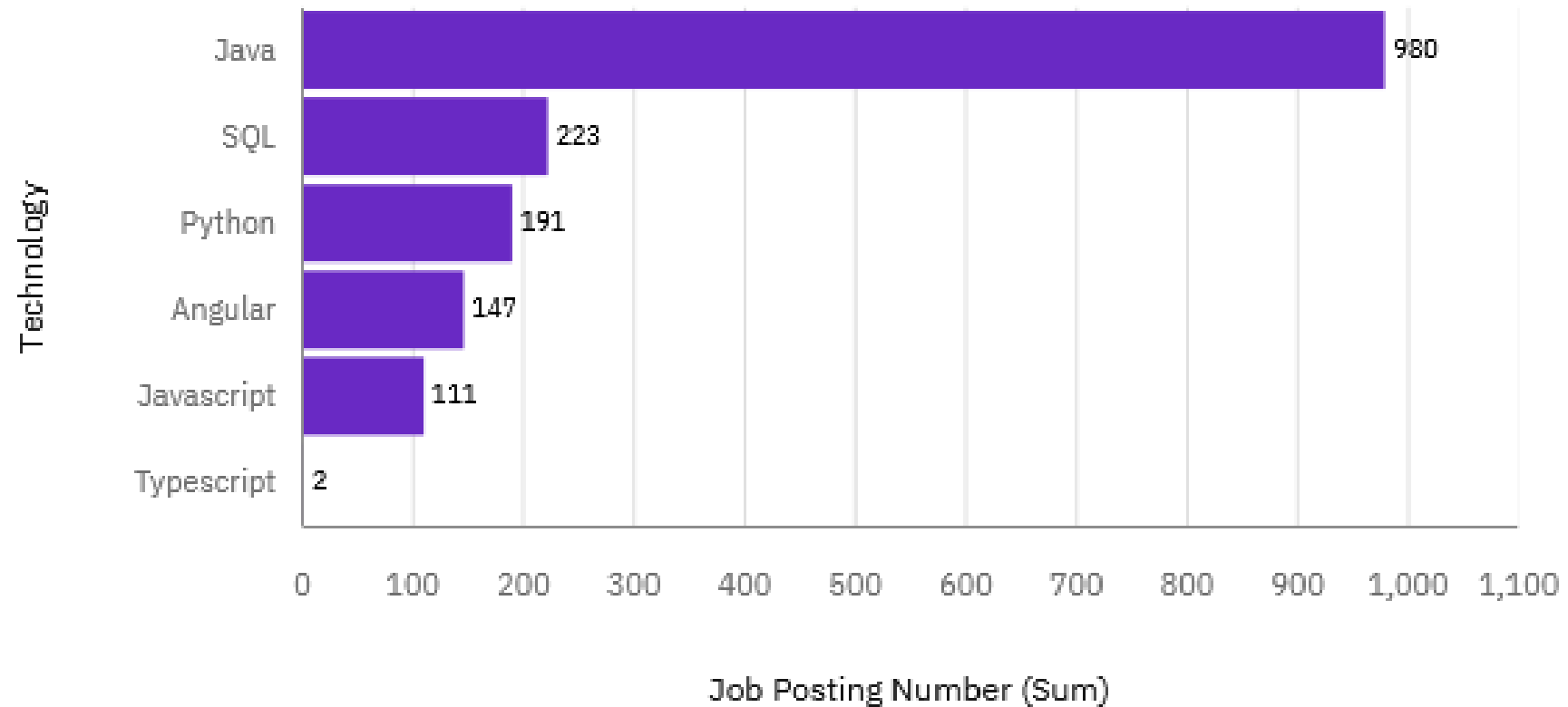
APPENDIX

%Respondent by DatabaseWorkedWith



JOB POSTINGS

Job Posting Number by Technology



POPULAR LANGUAGES

Average Annual Salary by Programming Language

