



Technology Trends & Analysis

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OUTLINE



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

EXECUTIVE SUMMARY



- Trends in programming languages and databases
- Demographics survey
- Technological gap among countries
- Gender gaps in jobs

INTRODUCTION



Summary:

Analyzing the trends in software development and programming languages

Purpose:

- What are the top programming languages in demand?
- What are the top databases in demand?
- What are the popular IDEs in use?

Audience: HR and IT Heads and Executives

METHODOLOGY



- Data Collection Sources
 - Survey Data Demographics
 - Survey Data Technologies
- Data Exploration and Discovery
- Data Cleaning
- Data Analysis
- Data Visualization
- Presentation and Reports

RESULTS

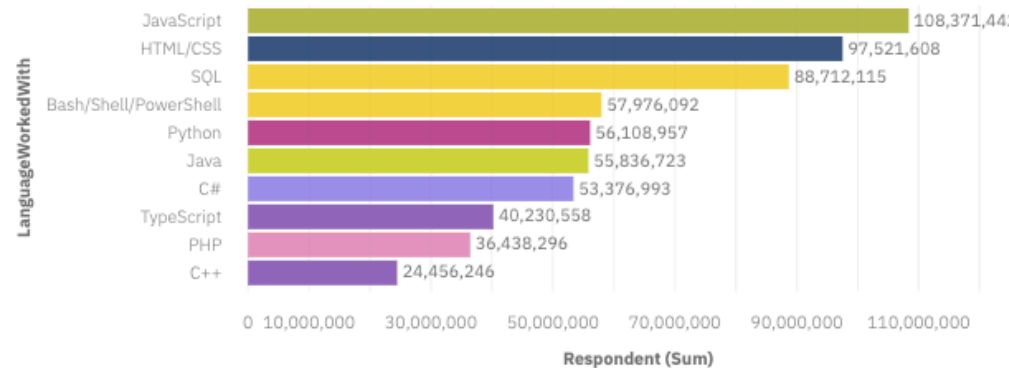


PROGRAMMING LANGUAGE TRENDS

Current Year

Top 10 Language Worked With

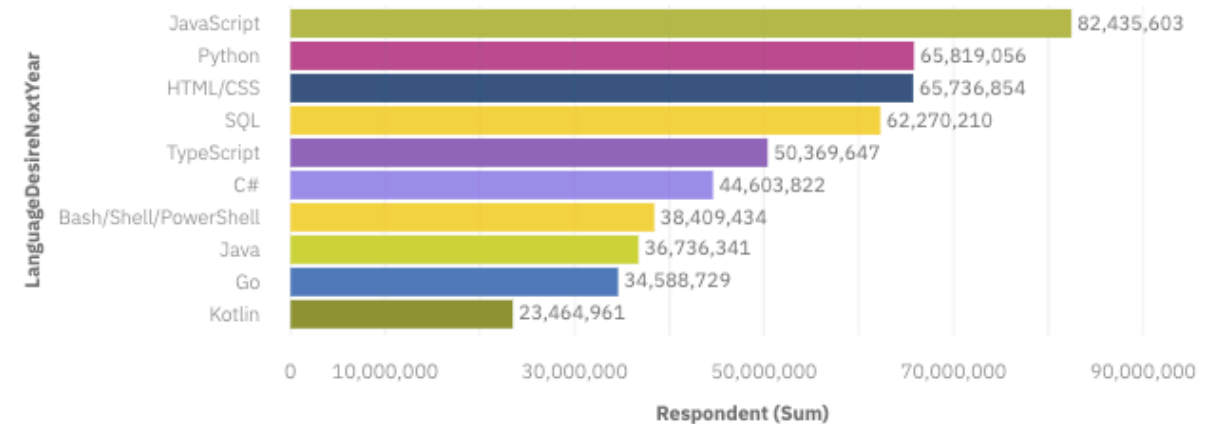
LanguageWorkedWith



Next Year

Top 10 Language Desire Next Year

LanguageDesireNextYear



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript, HTML/CSS, SQL are top 3 this year
- Python and Typescript becoming popular next year
- PowerShell will be edged out in next year

Implications

- Web development and relevant software are still popular
- Big Data and Cloud databases require SQL as a fundamental skill
- With AI and ML in rising demand, Python becomes more and more widely used

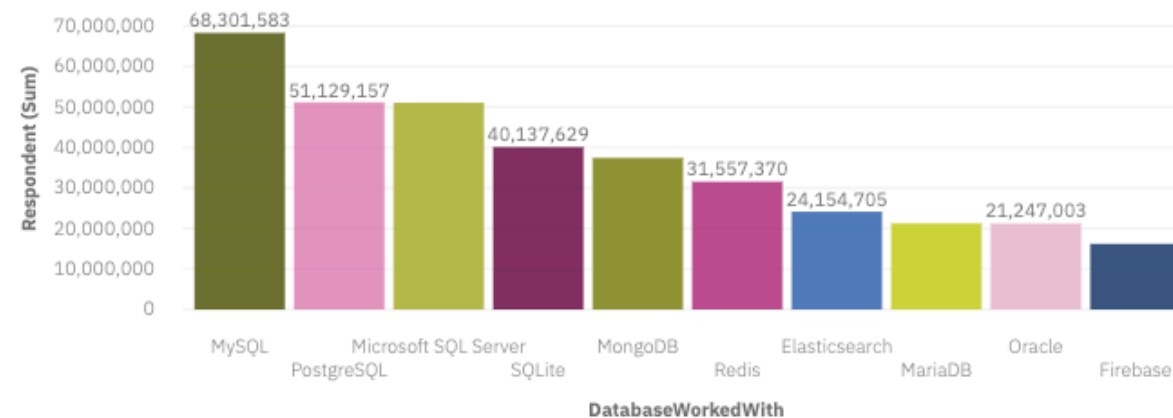
DATABASE TRENDS

Current Year

Top 10 Database Worked With

DatabaseWorkedWith

● Elasticsearch ● Firebase ● MariaDB ● Microsoft SQL Server ● MongoDB
● MySQL ● Oracle ● PostgreSQL ● Redis ● SQLite

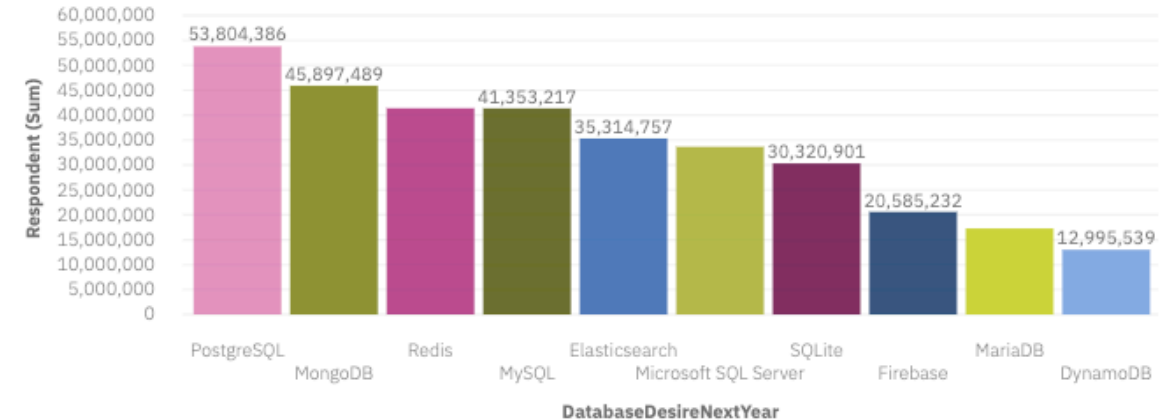


Next Year

Top 10 Database Desired Next Year

DatabaseDesireNextYear

● DynamoDB ● Elasticsearch ● Firebase ● MariaDB ● Microsoft SQL Server
● MongoDB ● MySQL ● PostgreSQL ● Redis ● SQLite



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is the most popular
- Followed by PostgreSQL
- The demand for MongoDB and Redis are rising
- New rising black horse: Elasticsearch

Implications

- Industries still prefer open source databases
- NoSQL databases are making a more and more significant impact to store unstructured data
- Pre tuned search to website, app or e-commerce stores

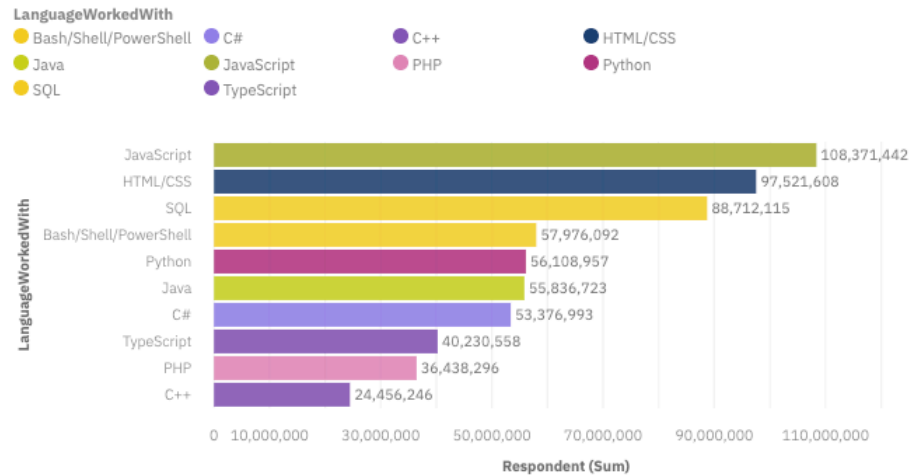
DASHBOARD



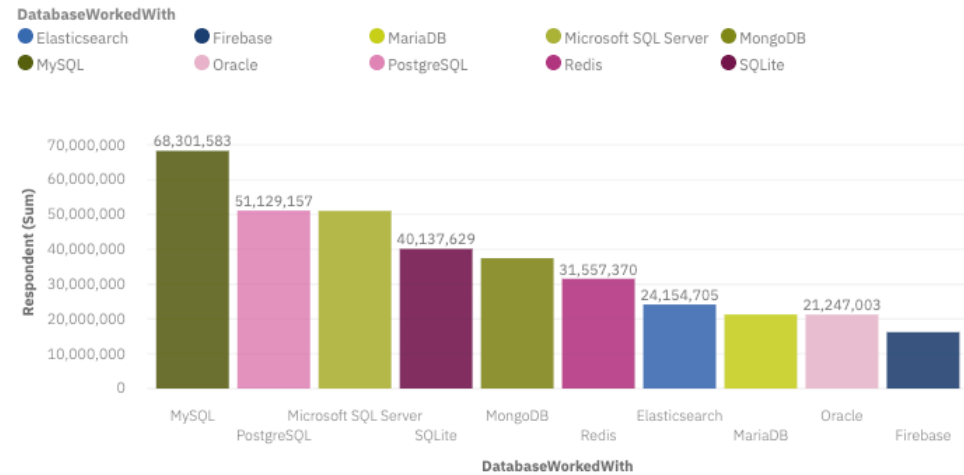
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DASHBOARD TAB 1

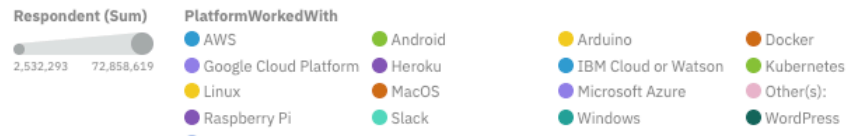
Top 10 Language Worked With



Top 10 Database Worked With



Platform Worked With

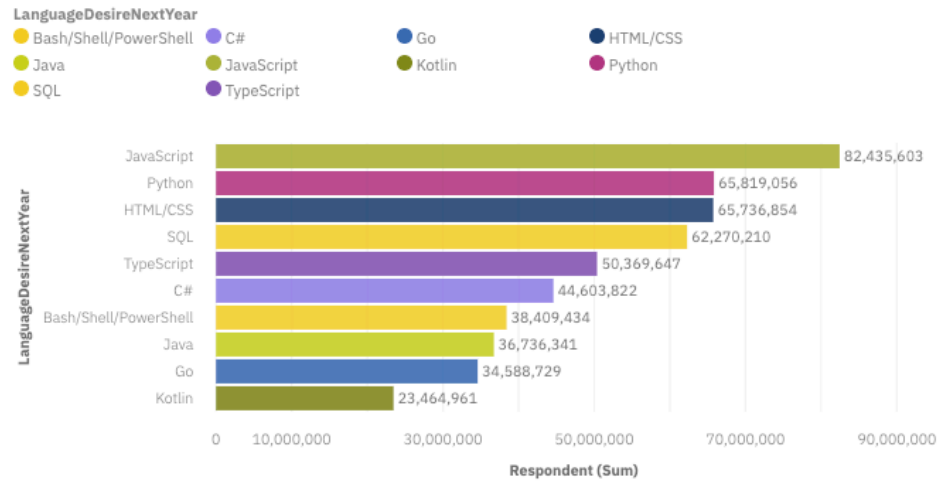


Top 10 WebFrame Worked With

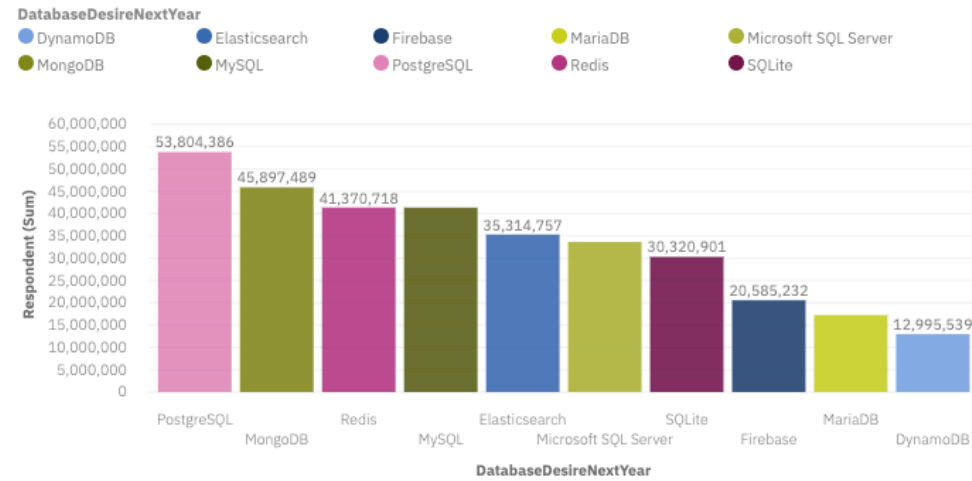


DASHBOARD TAB 2

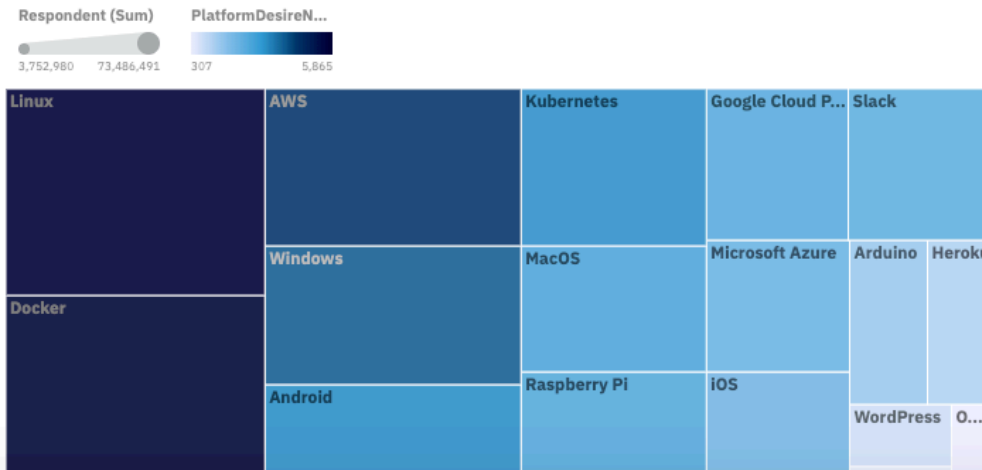
Top 10 Language Desire Next Year



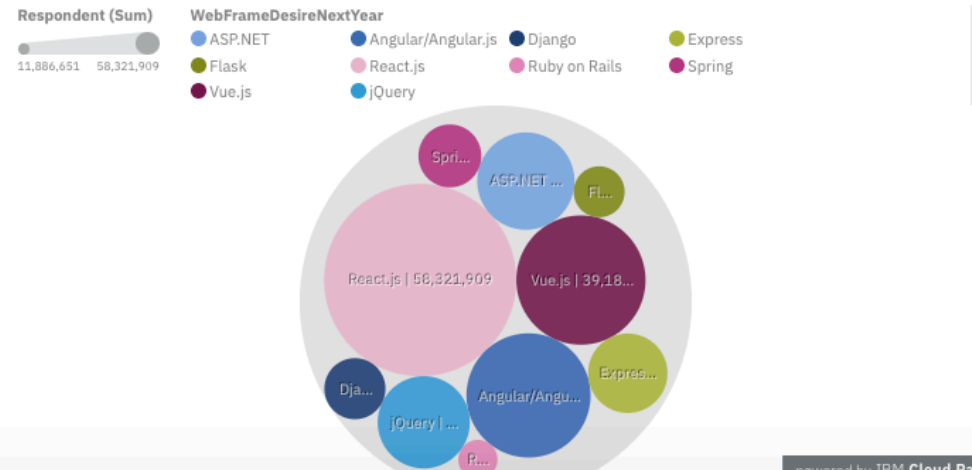
Top 10 Database Desired Next Year



Platform Desired Next Year



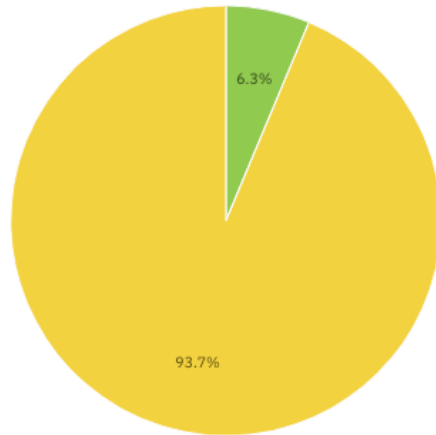
Top 10 WebFrame Desired Next Year



DASHBOARD TAB 3

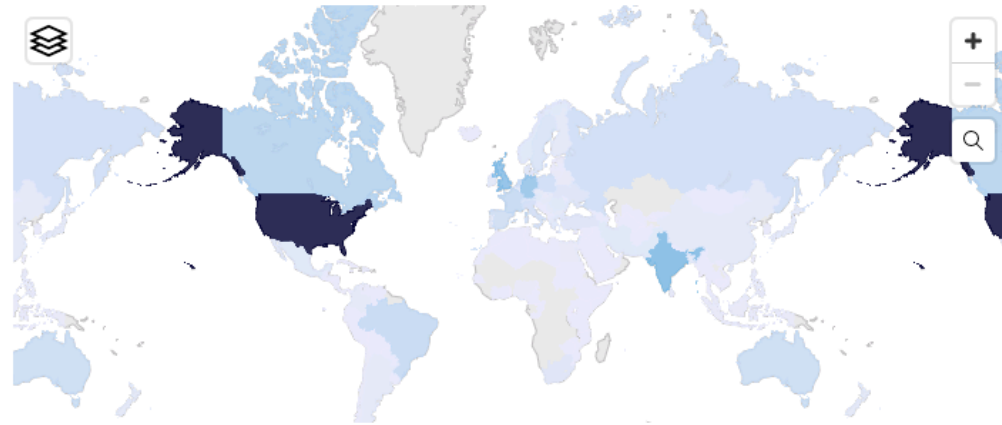
Respondent classified by Gender

Gender
● Woman ● Man

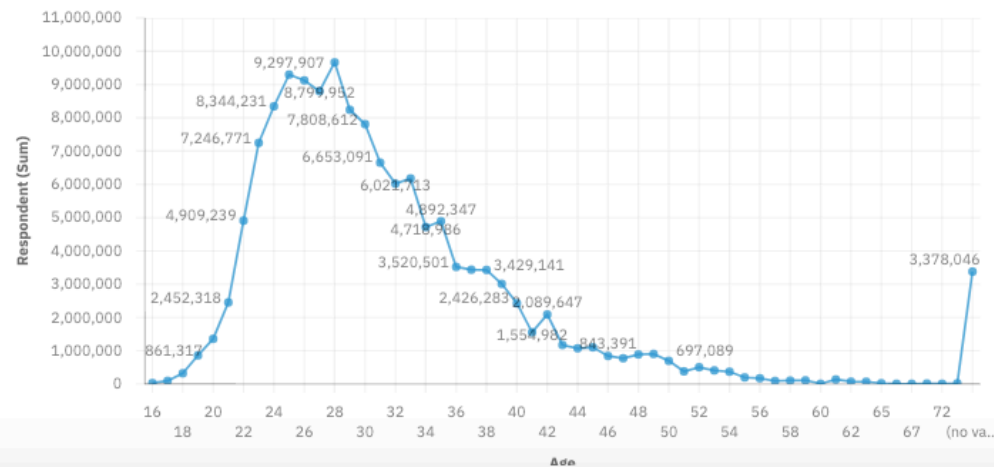


Respondent Count for Countries

Country (Count)
1 3,058

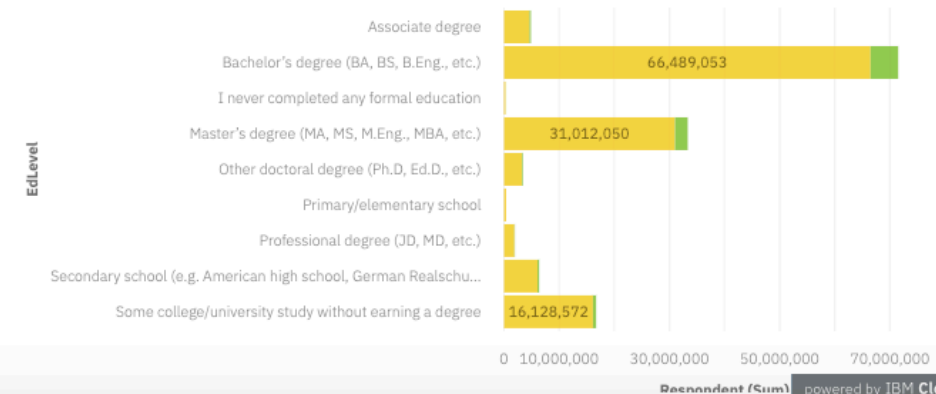


Respondent Count by Age



Respondent Count by Gender, Formal Education Level

Gender
● Man ● Woman



DISCUSSION



- Technology Trends now and future
- Training and reskilling workers with the most cutting-edge skills
- Promote for female participations in Technology field
- Bridge the technology gaps in developing countries
- Eliminate age and education discrimination in employment

OVERALL FINDINGS & IMPLICATIONS

Findings

- Fast changing technology and skills every year
- Geographic concentration on several countries like the US and India
- Fast growing cloud platforms like Docker and AWS
- Gender gap in technology industry

Implications

- Companies need to be flexible and quickly adapt to rapid changes
- Need to spread technology out to other countries
- Shift to faster app deployments and cloud services in the future
- More attention on D&I issues on technology employment

CONCLUSION



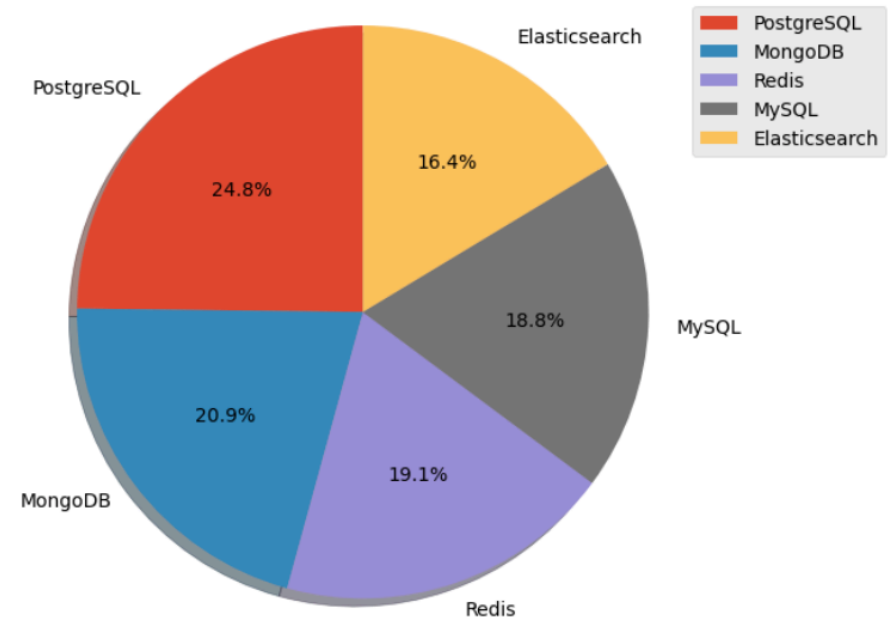
- We have discussed Technology Trends for this and next years
- Overview and summary on Programming languages, Databases and Platforms
- Analysis on Demographics
- Actions to be taken to narrow gender gaps
- In the future, put more focus on AI and ML to predict trends

APPENDIX



Count

Top 5 databases that respondents wish to learn next year



JOB POSTINGS

	Language	Job Postings
0	C	3237
1	C#	526
2	C++	506
3	Java	3428
4	JavaScript	2248
5	Python	1173
6	Scala	138
7	Oracle	899
8	SQL Server	423
9	MySQL Server	0
10	PostgreSQL	86
11	MongoDB	208

POPULAR LANGUAGES

Top 10 Language Worked With

