



# Technology Trends Analysis Presentation

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# OUTLINE

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

# EXECUTIVE SUMMARY

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- Trends in Programming Languages and Database
  - Current Technology usage
  - Future Technology usage
- Demographics survey

# INTRODUCTION

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- About: Analyzing the trends in software development
- Purpose:
  - Identify skill requirements for future
  - What are the top programming languages in demand?
  - What are the top database skills in demand?
  - What are the popular IDEs?
- Audience: Human Resource and IT Head

# METHODOLOGY

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- Data Collection Source
  - Stack overflow developer survey 2019
  - Annual Salary Data
- Data Exploration
- Data Wrangling
- Data Visualization and Analysis

# RESULTS

Results are based on this data table

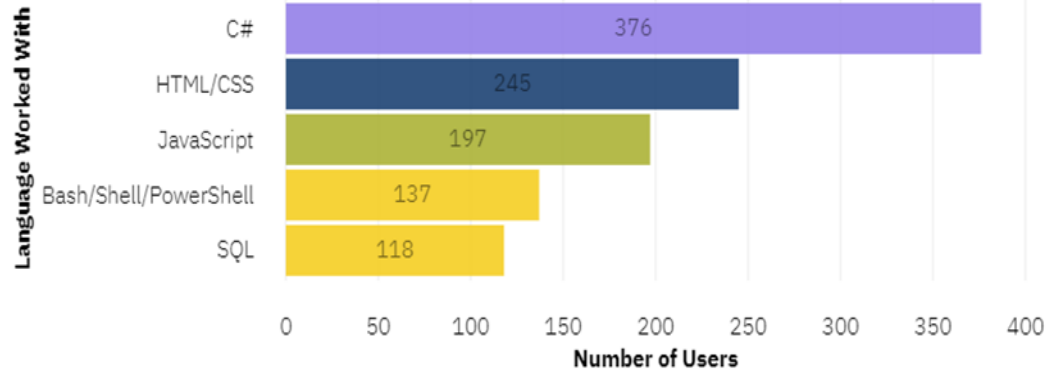
	Respondent	LanguageWorkedWith	LanguageDesireNextYear	DatabaseWorkedWith	DatabaseDesireNextYear	PlatformWorkedWith	PlatformDesireNextYear	Well
0	NaN	NaN	NaN	NaN	NaN	NaN	NaN	
1	4.0	C	C	MySQL	MySQL	Linux	Linux	
2	4.0	C++	C#	SQLite	SQLite	Windows	Windows	
3	4.0	C#	JavaScript	NaN	NaN	NaN	NaN	
4	4.0	Python	SQL	NaN	NaN	NaN	NaN	
5	4.0	SQL	NaN	NaN	NaN	NaN	NaN	
6	9.0	Bash/Shell/PowerShell	Bash/Shell/PowerShell	DynamoDB	PostgreSQL	AWS	AWS	
7	9.0	C#	C	PostgreSQL	Redis	Docker	Docker	
8	9.0	HTML/CSS	HTML/CSS	SQLite	SQLite	Heroku	Heroku	
9	9.0	JavaScript	JavaScript	NaN	NaN	Linux	Linux	

# PROGRAMMING LANGUAGE TRENDS

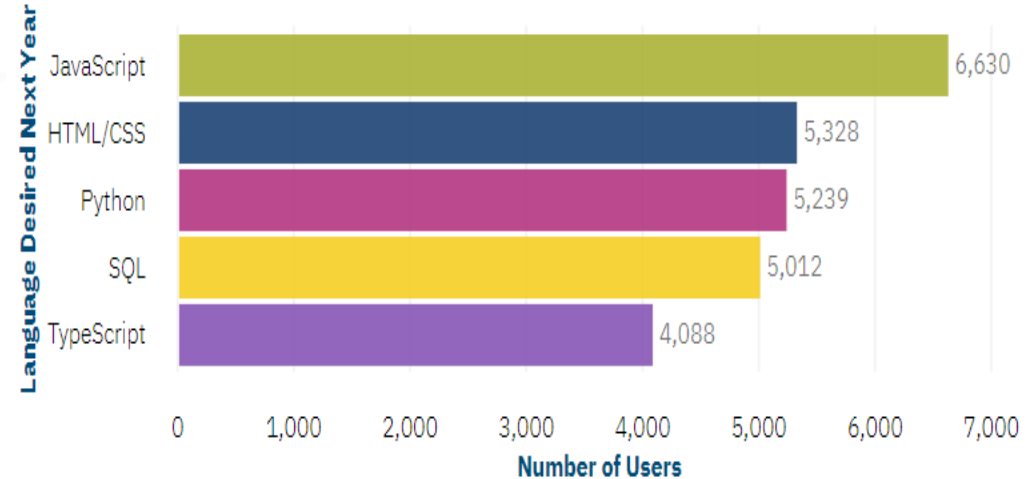
Current Year

Next Year

Top 5 Language Worked With



Top 5 Language Desire Next Year



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- C# ,CSS/HTML ,JavaScript are the most popular language in this year
- Python and Typescript becoming popular next year
- PowerShell edged out in next year

## Implications

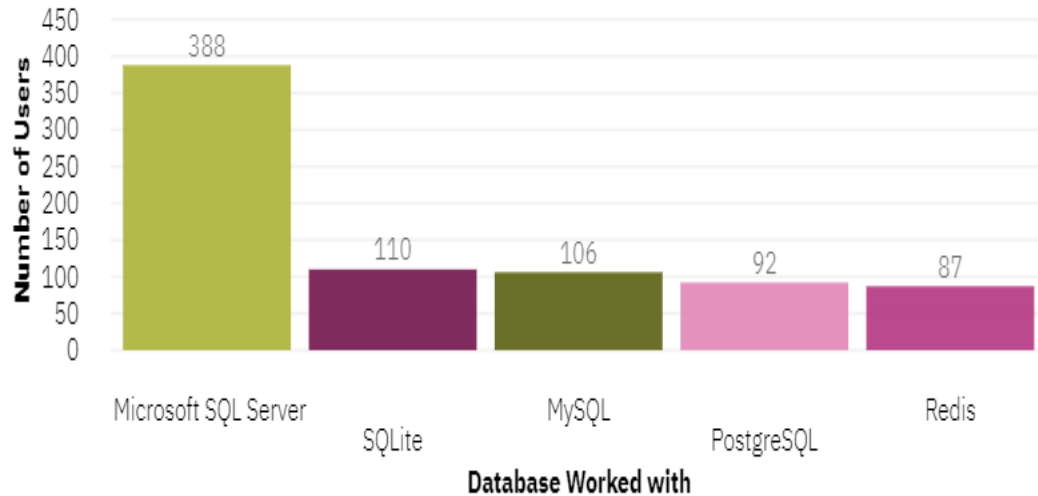
- Web Development are still in Demand
- Big Data technology in companies still requires SQL
- With AI and ML in rising demand, Python is best choice



# DATABASE TRENDS

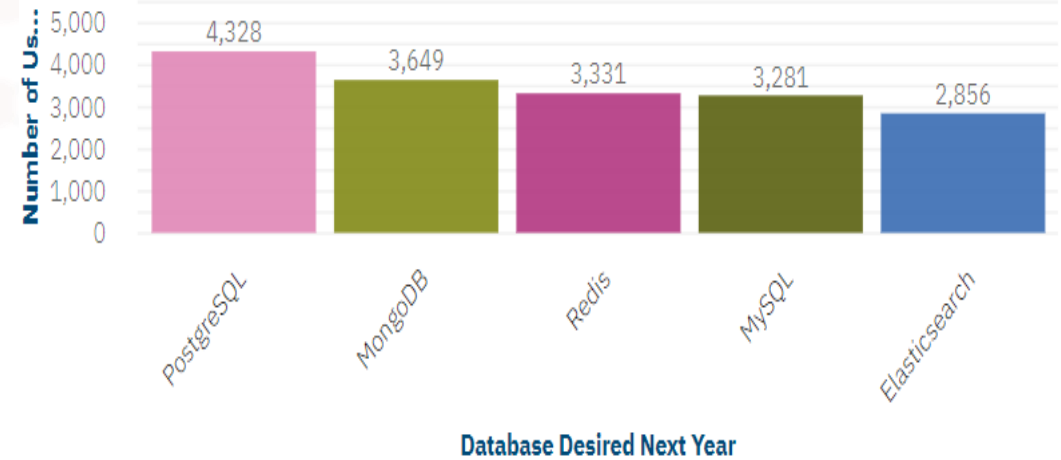
## Current Year

Top 5 Database Worked With



## Next Year

Top 5 Database Desire Next Year



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- Microsoft SQL Server is the most popular, behind is Sqlite in this year
- MongoDB ,PostgreSQL and Redis are upcoming favorites
- Elastic Search is growing

## Implications

- Open-source databases are still preferable in companies
- NoSQL databases will make an impact for storing non-relational data
- Redis supports abstract data types
- Pre-tuned search to website, app, or ecommerce store

# DASHBOARD

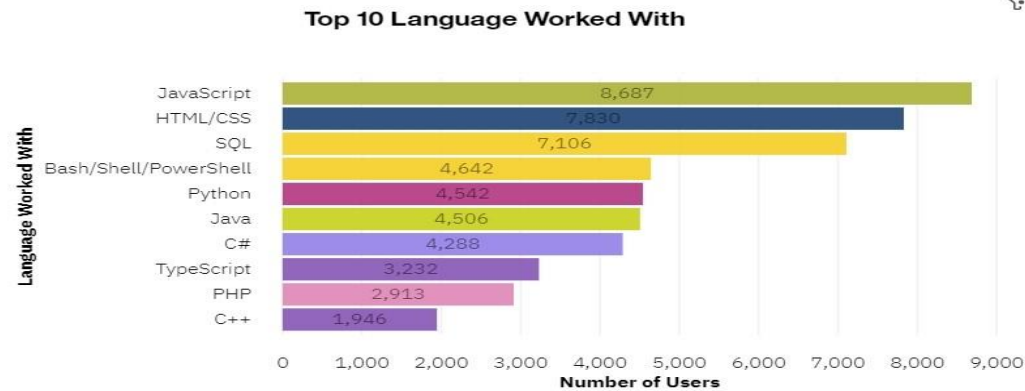
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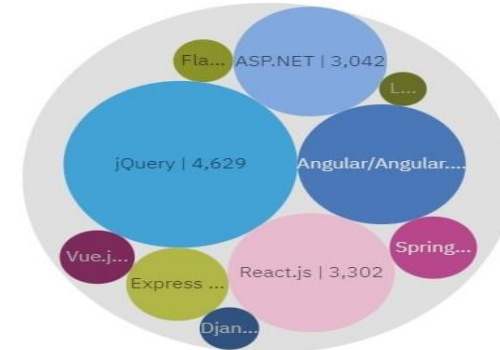
IBM DASBOARD LINK

[https://dataplatform.cloud.ibm.com/dashboards/d729a43e-428e-4fd3-aefc-f25d82c3f3fb?project\\_id=0dff957-3d15-47aa-b4db-37261234738f&userfs=false&context=cpdaas&mode=consumption](https://dataplatform.cloud.ibm.com/dashboards/d729a43e-428e-4fd3-aefc-f25d82c3f3fb?project_id=0dff957-3d15-47aa-b4db-37261234738f&userfs=false&context=cpdaas&mode=consumption)

# DASHBOARD TAB 1(Current Trend)

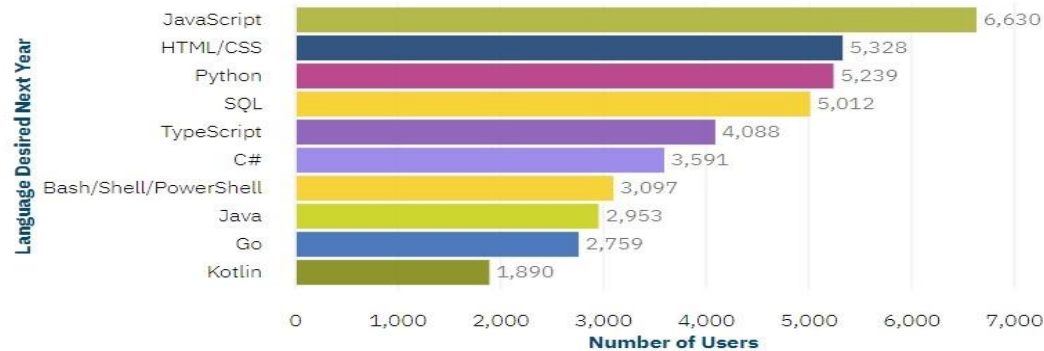


**Top 10 Web Frame Worked With**

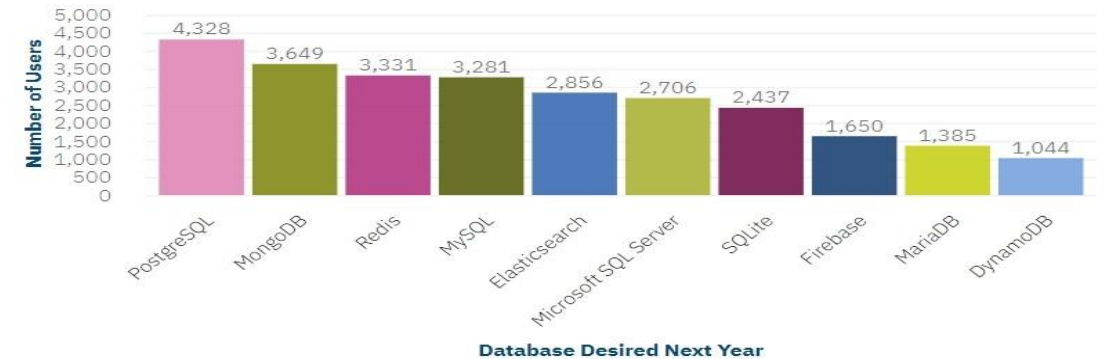


# DASHBOARD TAB 2(Future Trend)

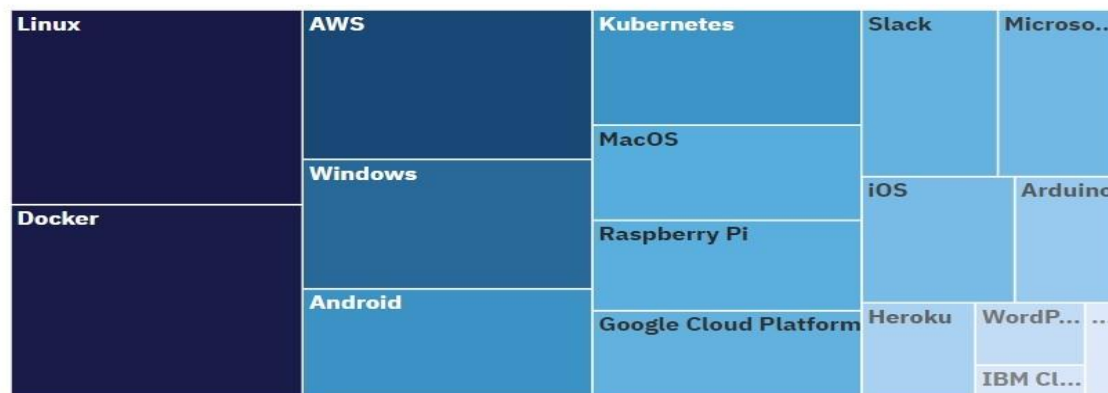
Top 10 Language Desire Next Year



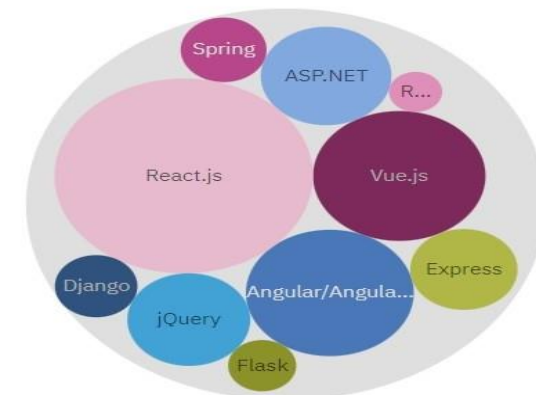
Top 10 Database Desire Next Year



Platform Desire Next Year



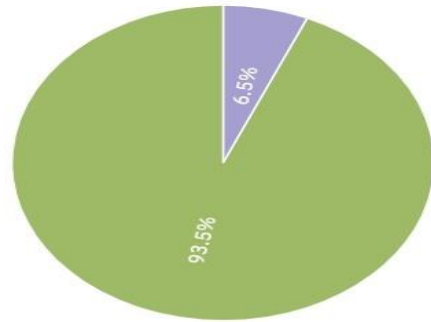
Top 10 Web Frame Desire Next Year



# DASHBOARD TAB 3 (Demographics)

Respondent classified by Gender

Gender  
Woman Man

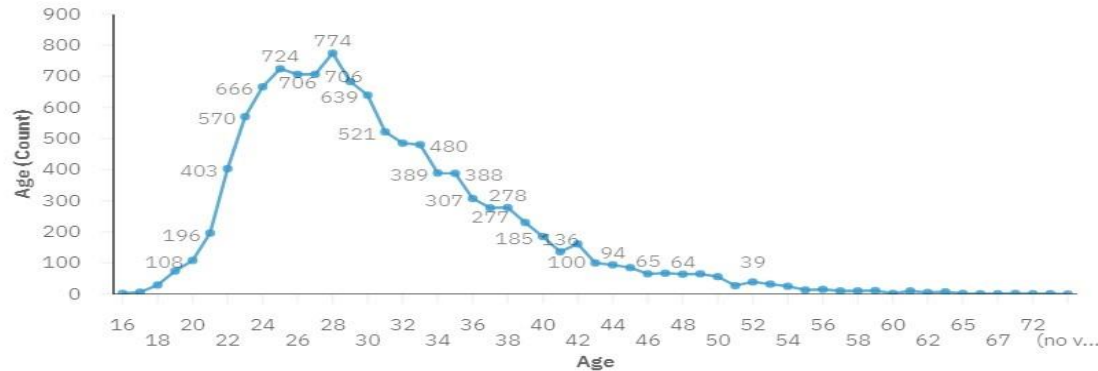


Respondent Count for Countries

Country (Count)  
1 3,058



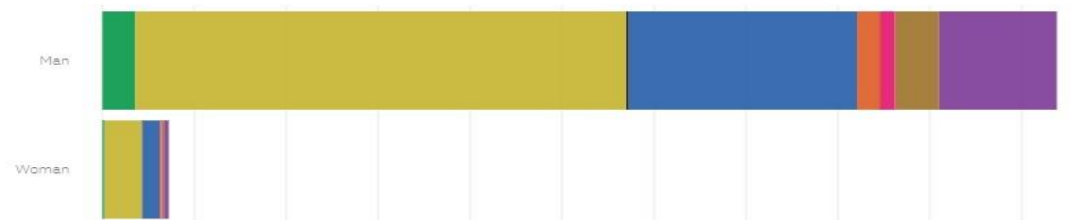
Respondent Count by Age



Respondent Count by Gender, classified by Formal Education Level

Legend:

- (no value)
- 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 ...



# DISCUSSION

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- Present and Future Technology Trend
- Workers need to be trained and reskilled
- Females participation in Technology field
- Bridge divide of technology gaps in developing countries
- Eliminate age and education discrimination in employment

# OVERALL FINDINGS & IMPLICATIONS

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## Findings

- Fast changing technology every year
- Concentration on several countries like USA and India
- Gender gap in technology jobs
- Platforms like Docker and AWS are growing

## Implications

- Companies need to be flexible and adjust to rapid changes
- Lagging Countries need to be focused
- Impact of job hiring's
- Shift to faster app deployments and cloud services in future



# CONCLUSION

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- Technology Trends for current and next year
- Programming Languages, Database and Platform overview
- Demographics overview
- Actions to be taken
- In future, incorporate Machine Learning to predict trends and salaries

# APPENDIX



# JOB POSTINGS

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# POPULAR LANGUAGES

