



# Technology Usage & Demographics

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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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- The report analysis the usage of technology which include programming languages ,databases, platforms and dataframes for the current and next year.
- Analysis is done by collecting ,wrangling and conducting exploratory data analysis data from a survey and plotting various charts to understand the data.
- Results shows that:-
  - Javascript is the top programming language with Python,HTML/CSS,SQL and TypeScript to be amongst the top desired language for next year.
  - Dethroning MySQL ,PostgreSQL and MangoDB will be the amongst the top desired Database for next year
  - Linux ,Windows,AWS and Docker to be amongst the top platforms in the both the years

# INTRODUCTION

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- To understand how Top Programming Languages are performing and their respective scope in future
- To understand how Top Databases are performing and their respective scope in future
- Top Platforms and Webframes and their future
- To know who the respondents are on the basis of:-
  - Gender
  - Age
  - Countries
- To know which language is ruling in GITHUB Jobs and their annual average salary

# Top 10 worked with this Year

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- Top 10 Worked With this Year

- Top 10 Programming Languages

- |                         |                |
|-------------------------|----------------|
| 1- JavaScript           | 6 - Java       |
| 2-HTML/CSS              | 7 - C#         |
| 3-SQL                   | 8 - Typescript |
| 4-Bash/shell/PowerShell | 9 - PHP        |
| 5-Python                | 10 - C++       |

- Top 10 Database Languages

- |                         |                   |
|-------------------------|-------------------|
| 1- MySQL                | 6 - Redis         |
| 2- Microsoft SQL server | 7 - Elasticsearch |
| 3-PostgreSQL            | 8 - Oracle        |
| 4-SQLite                | 9 - MariaDB       |
| 5-MongoDB               | 10 - Firebase     |

# Continue

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- Top 10 Worked With this Year
  - Most Popular Platforms



Activate Windows  
Go to Settings to activate V

# Top 10 worked with Next Year

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- Top 10 Programming Languages

- |               |                          |
|---------------|--------------------------|
| 1- JavaScript | 6 - C#                   |
| 2- Python     | 7- Bash/shell/PowerShell |
| 3- HTML/CSS   | 8- Java                  |
| 4-SQL         | 9- Go                    |
| 5-Typescript  | 10 - Kotlin              |

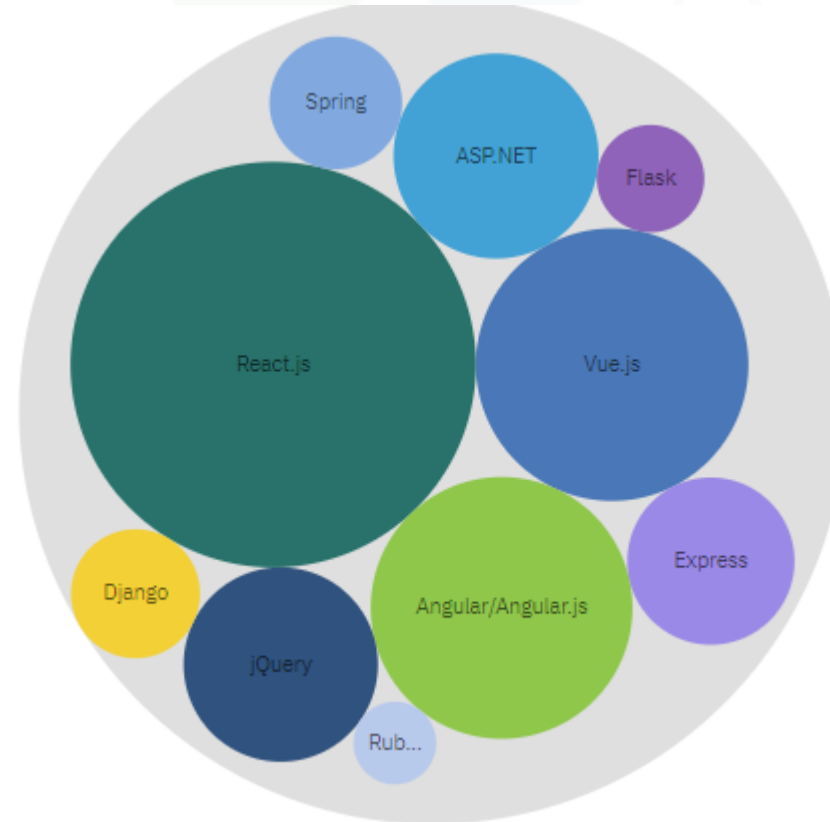
- Top 10 Database Languages

- |                         |                   |
|-------------------------|-------------------|
| 1- MySQL                | 6 - Redis         |
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# Continue

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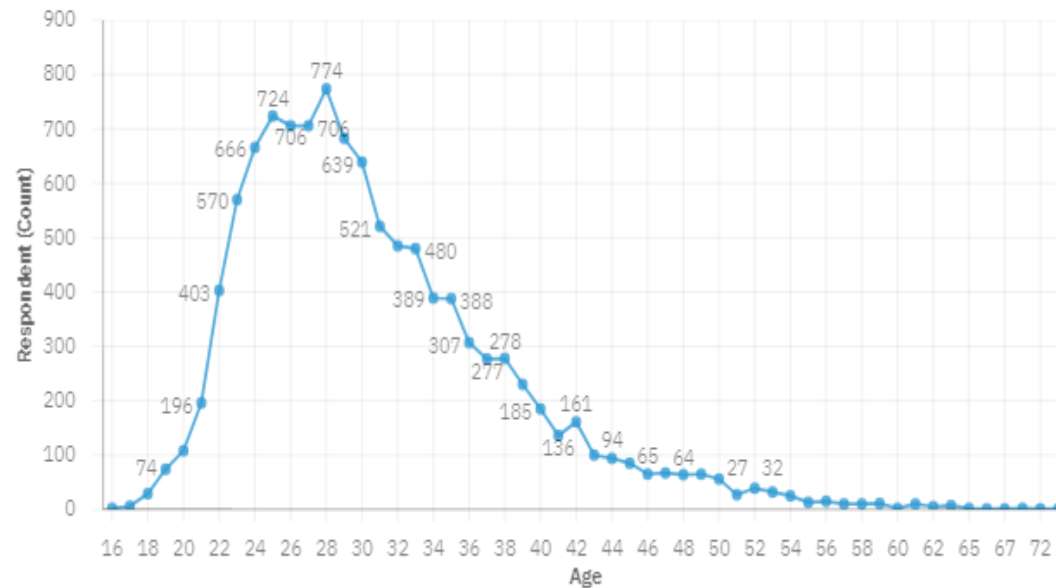
- Top 10 web Framework future





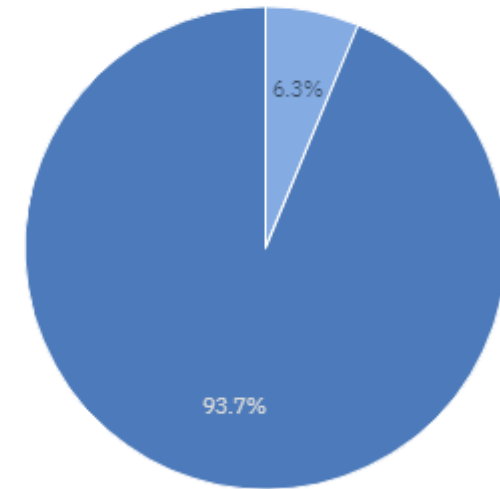
# Men vs Women Survey Respondent

Respondent Count by Age



Respondent classified by Gender

Gender  
● Woman ● Man



# METHODOLOGY

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- IBM Cloud
- Congo Analytic & CSV files
- To understand how Top Programming Languages are performing and their respective scope in future
- To understand how Top Databases are performing and their respective scope in future
- Top Platforms and Webframes and their future
- To know who the respondents are on the basis of:-
  - Gender
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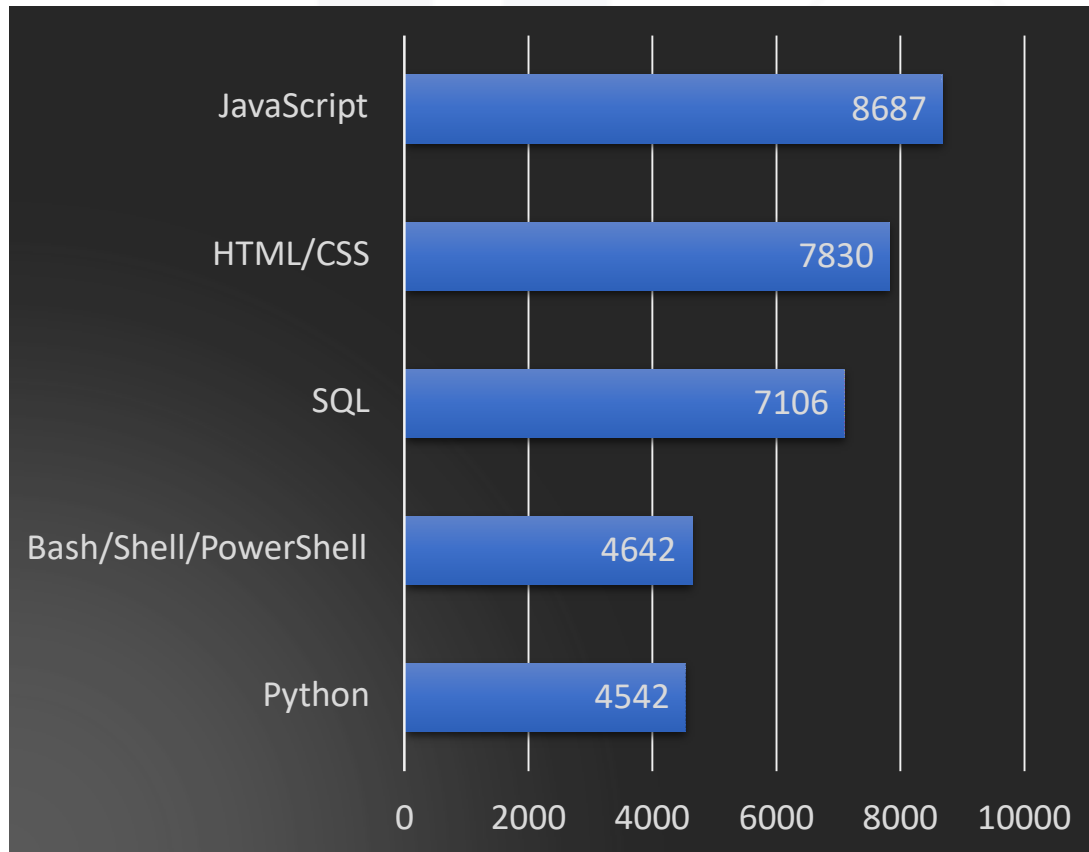
# RESULTS

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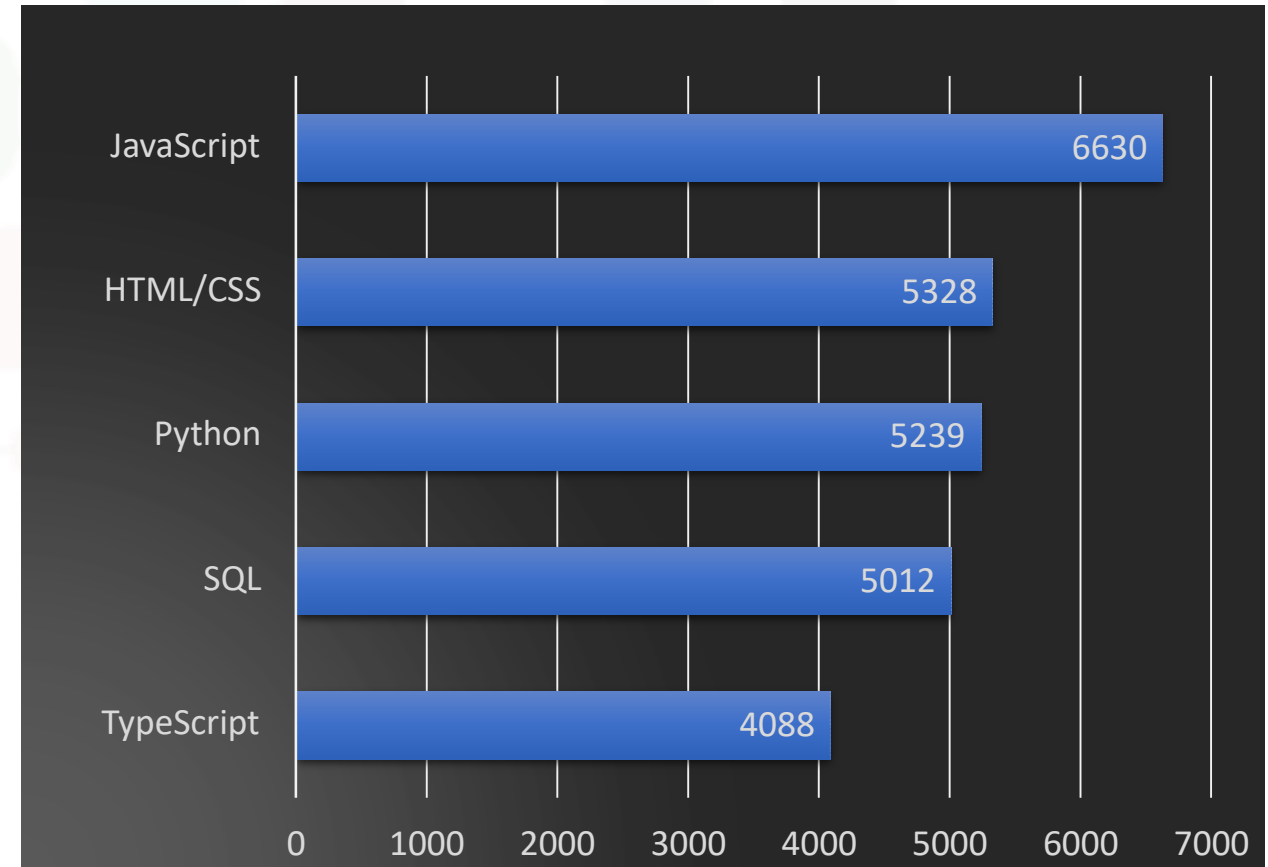
- JavaScript is the Present and Future
- Structure Database more used than Unstructured
- Linux most popular platform
- Women most Proportion
- Linux and Windows being the top platforms for the current year with Docker and AWS to be coming as a strong alternative

# PROGRAMMING LANGUAGE TRENDS

Current Year



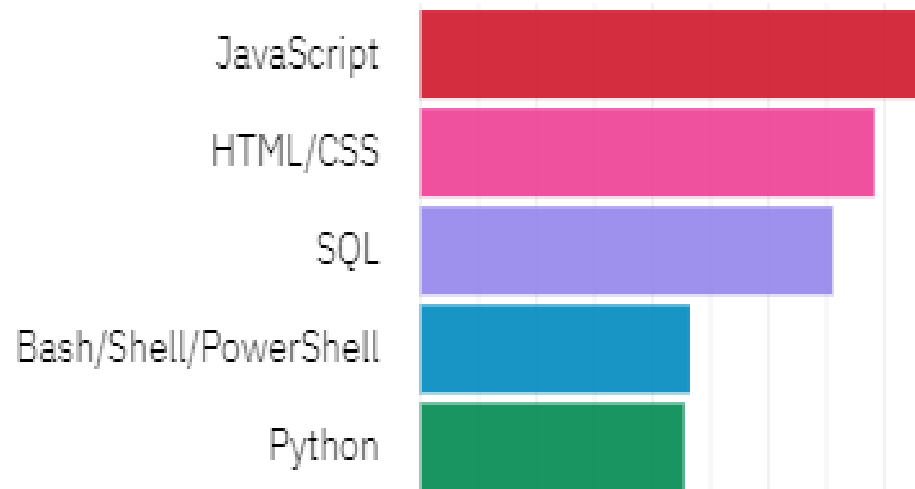
Next Year



# PROGRAMMING LANGUAGE TRENDS

Current Year

Top 5 Programming Languages



Next Year

Top 5 Programming Languages



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

## Findings

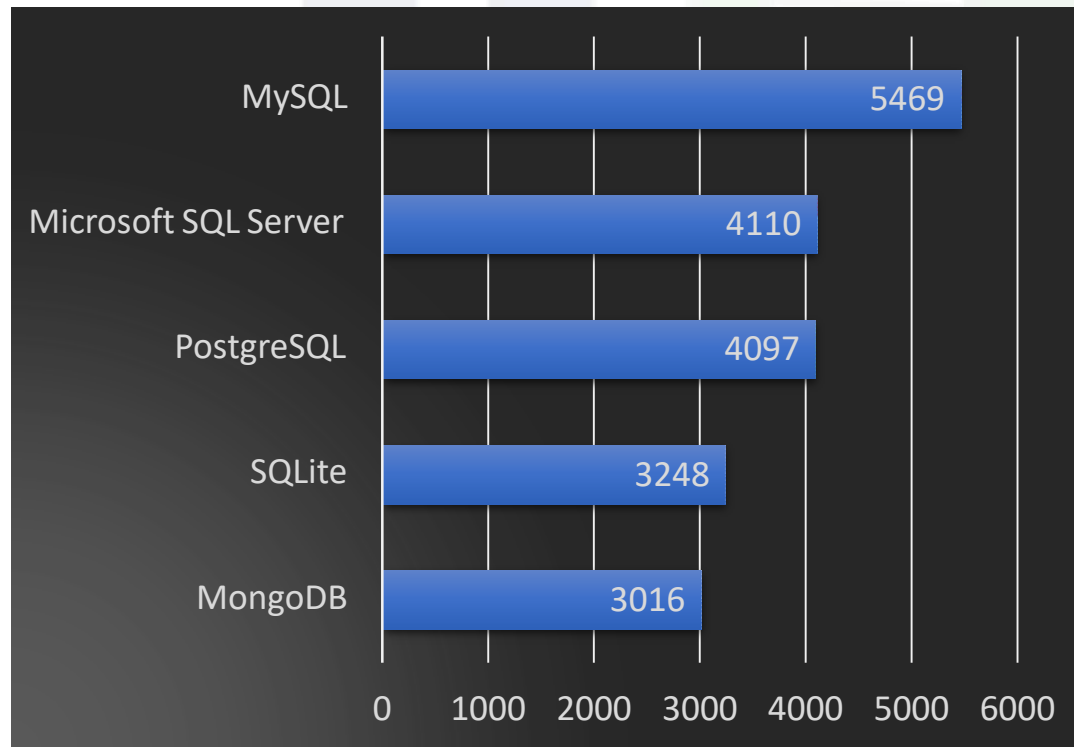
- Javascript is the top used language this year and is top desired language for next year too.
- Python will come for 5<sup>th</sup> to 3<sup>rd</sup> in the top language used list.
- Bash/Shell/Poweshell will lose its position from Top 5 and TypeScript will take its place.

## Implications

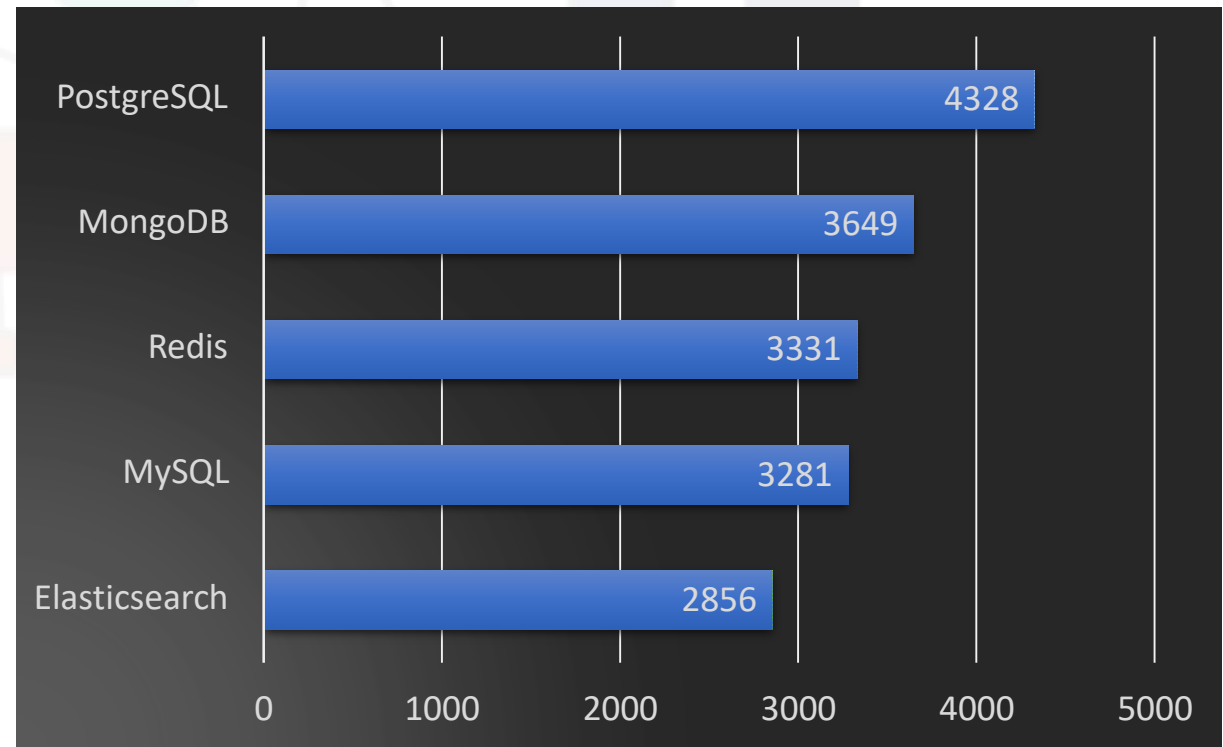
- Javascript will be the amongst the top skill required in IT industry
- Python jobs and courses will increase in next year
- Typescript jobs and courses will increase and requirement of Powershell won't be a key skill later.

# DATABASE TRENDS

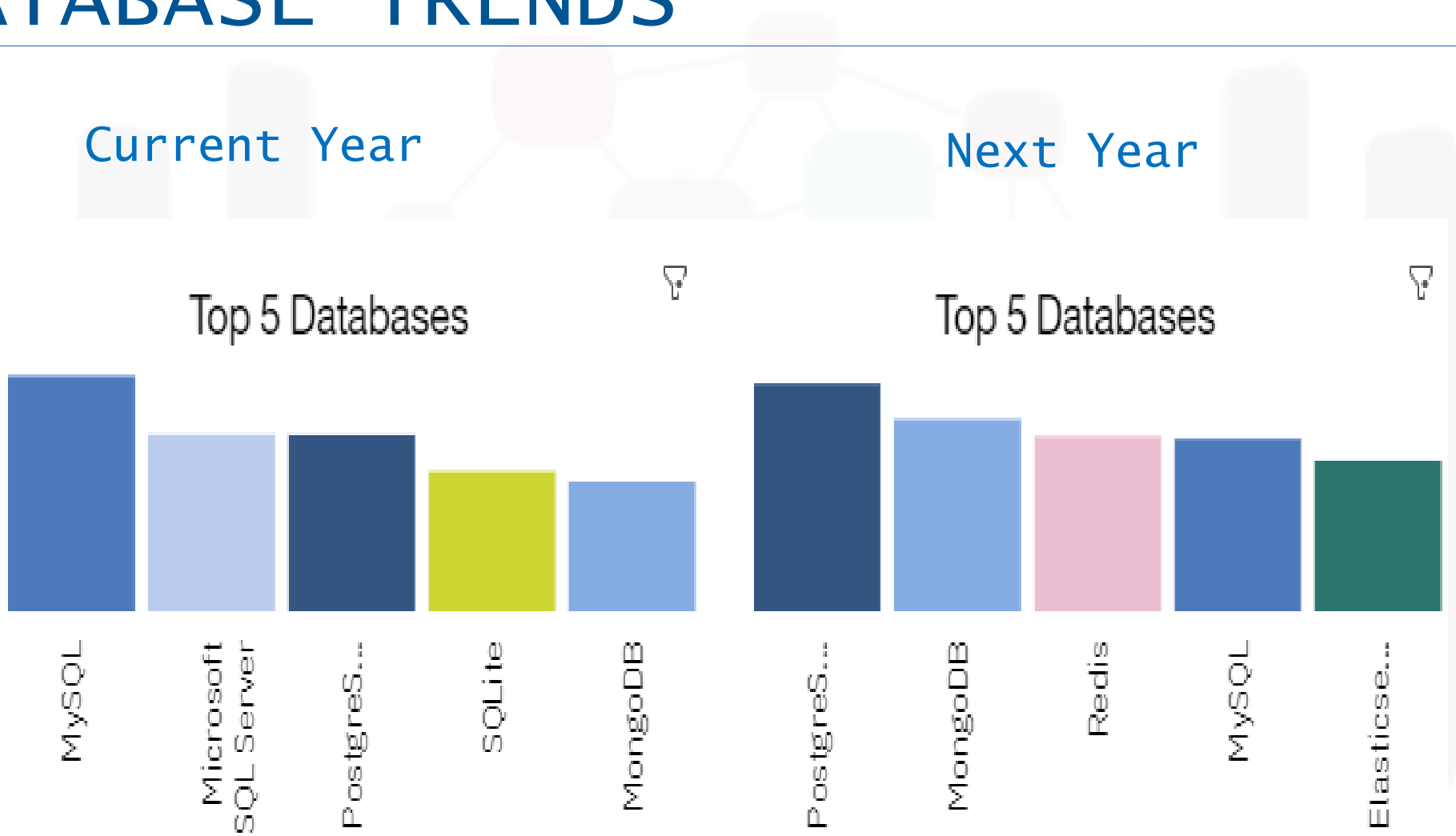
Current Year



Next Year



# DATABASE TRENDS





# DATABASE TRENDS – FINDINGS & IMPLICATIONS

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## Findings

- MySQL dropped its ranks in the top Database list.
- PostgreSQL and MongoDB jumped there ranks becoming 1<sup>st</sup> and 3<sup>rd</sup> desire Databases respectively.
- Microsoft SQL Server and SQLite also dropped and replaced by Redis and Elasticsearch in Top 5 Database list.

## Implications

- Demand of MySQL will decrease but still be amongst the key skill requirements.
- Jobs and Courses for PostgreSQL and MongoDB will increase rapidly
- Jobs and Courses for Redis and Elasticsearch will increase and demand of Microsoft SQL Server and SQLite will decrease.

# DASHBOARD

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<https://eu-gb.dataplatform.cloud.ibm.com/dashboards/fbbbad68-92b1-4ecf-a7da-9b0db736d61b/view/4160de2601b43bd161c1c0e407cc2a077430765ab5bb8501d6857b490b627997a8684292c87c1d538b170335fbef170a9d>

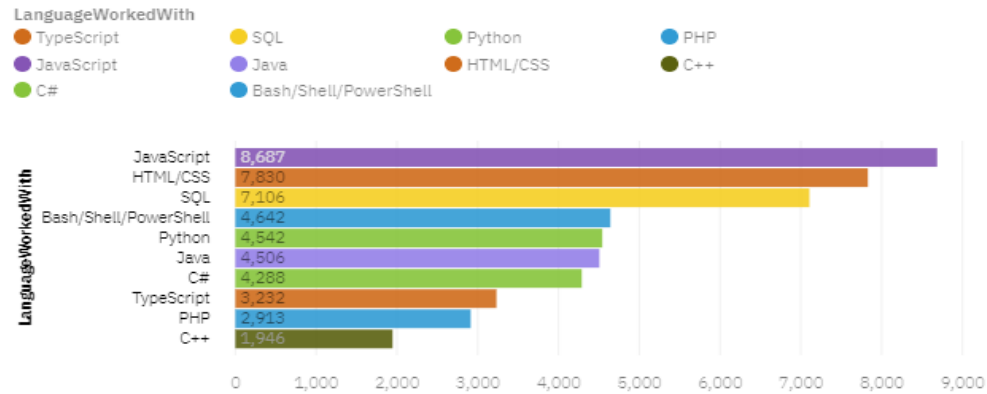
# DASHBOARD TAB 1

Current Technology Usage

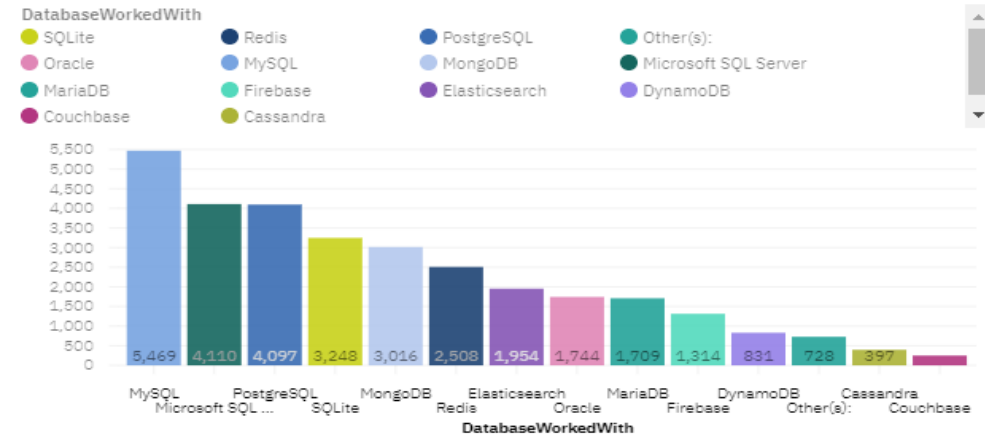
Future Technology Trend

Demographics

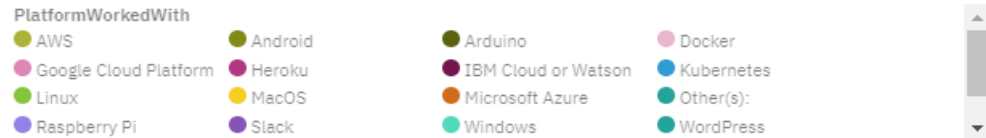
## Top 10 Language



## Top 10 Database



## PlatformWorkedWith



## Top 10 WebFrameWorkedWith



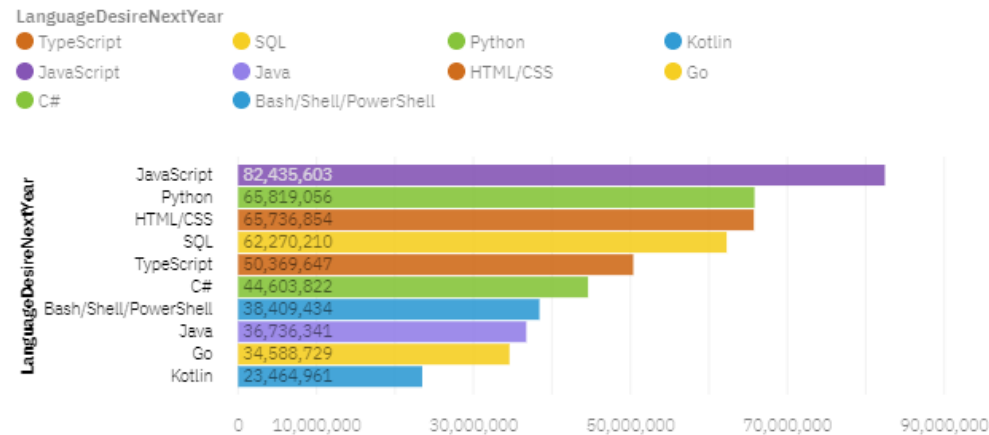
# DASHBOARD TAB 2

Current Technology Usage

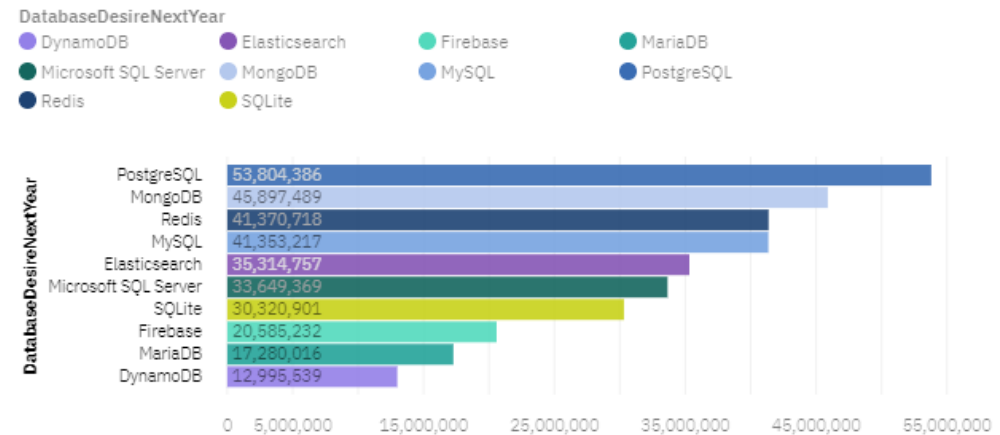
Future Technology Trend

Demographics

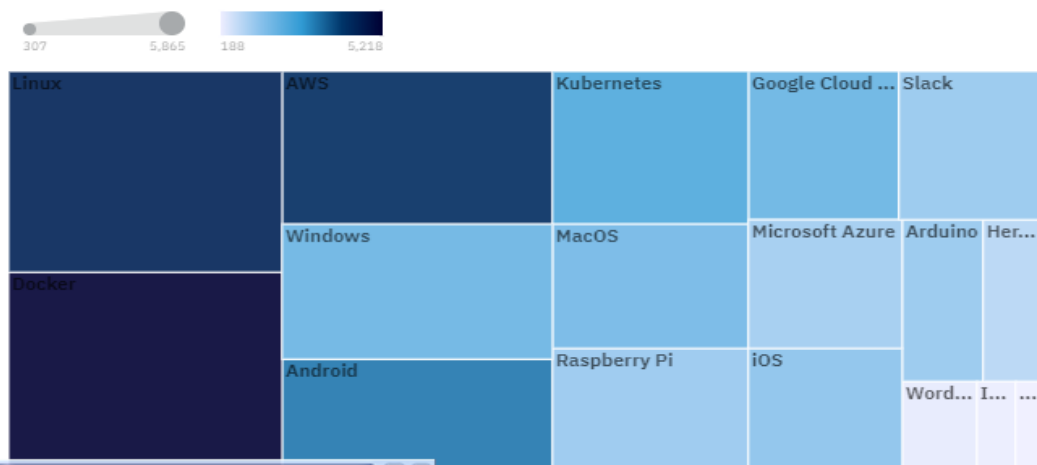
## Top 10 Language Next Year



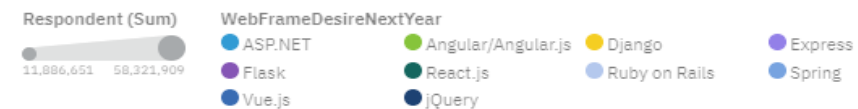
## Top 10 Database Next Year



## Platform Desire Next Year



## Top 10 Web Frame Desire Next Year



IBM

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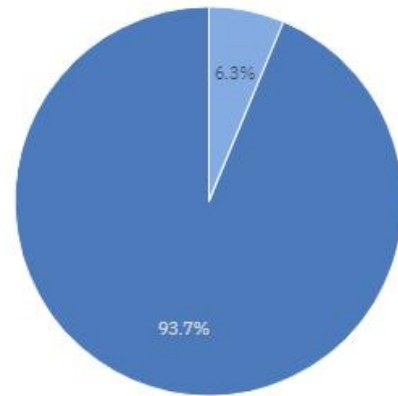
Activate Windows  
Go to Settings to activate Windows.



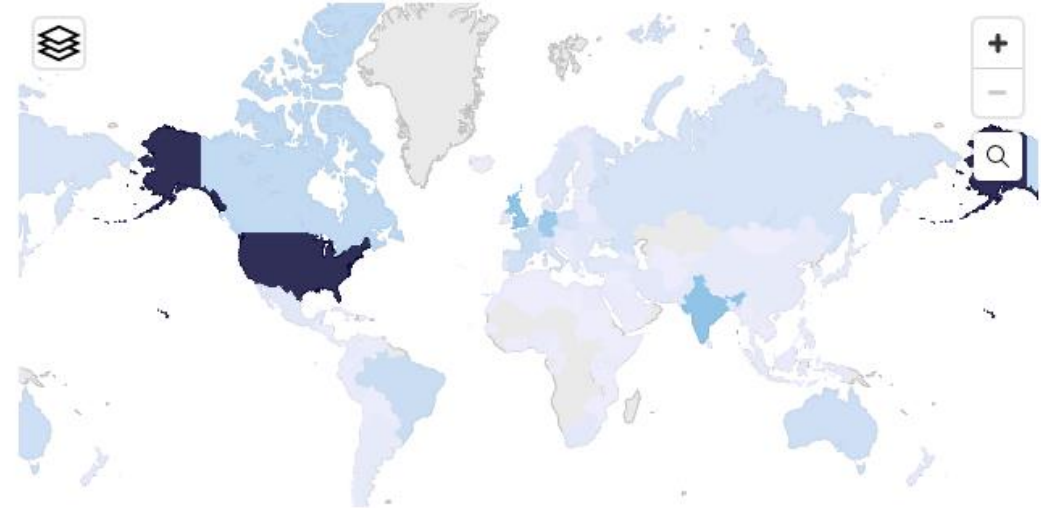
# DASHBOARD TAB 3

Respondent classified by Gender

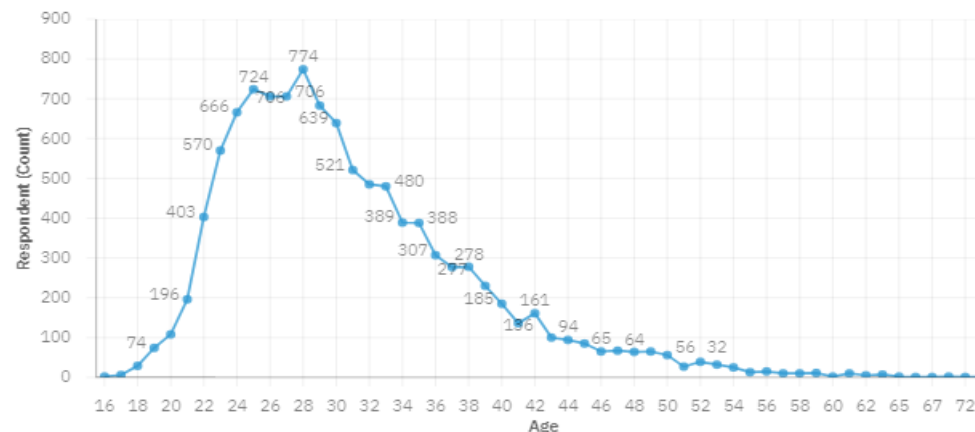
Gender  
● Woman ● Man



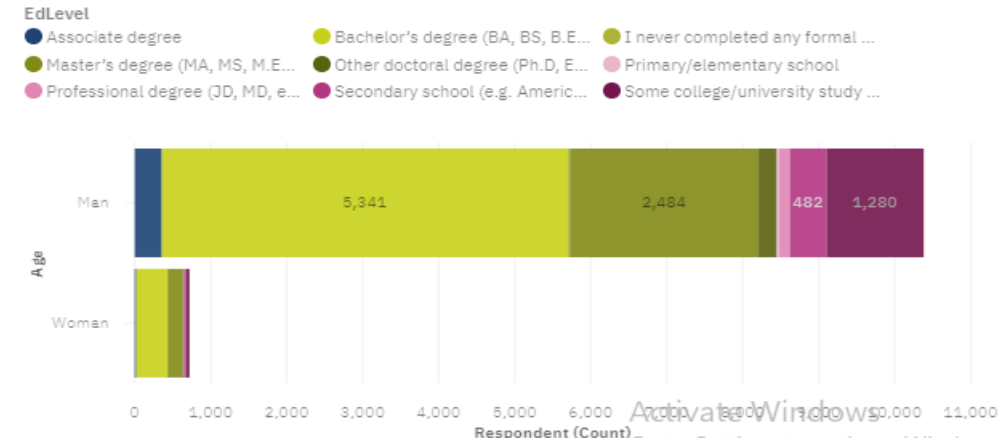
Respondent Count for Countries



Respondent Count by Age



Respondent Count by Gender



# DISCUSSION

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- Any Questions ?!



# OVERALL FINDINGS & IMPLICATIONS

- Findings

- Linux and Windows being the top platforms for the current year with Docker and AWS to be coming as a strong alternative
- jQuery and React.js taking the top positions in amongst other webframes for this year with Angular, ASP.net and Express becoming more desired than jQuery for the next year.
- Respondents with majority male with a large number fall under the age group of 22-40 resides mostly in United States had an Undergraduate degree of BA, BB, B.Eng.

- Implications

- Windows to make updates to stand against the competition coming from AWS and Docker
- Large no. of job opportunities will be coming from United States with India, Germany and UK also in the list.

# CONCLUSION

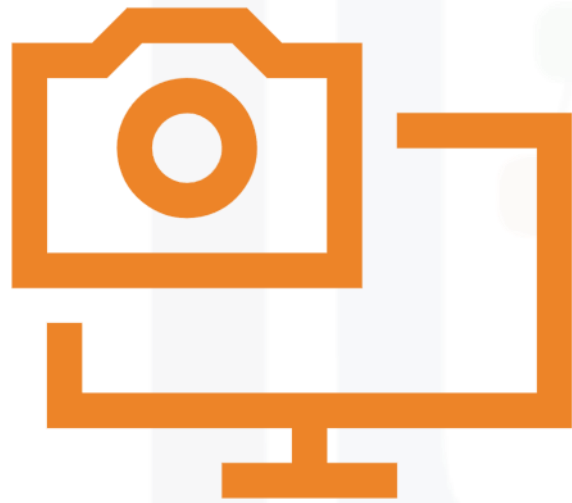
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- JavaScript is the simple and Future
- Structure Database more used than Unstructured
- Linux most popular platform
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- Python jobs and courses will increase in next year with Javascript will be the amongst the top skill required in IT industry
- Jobs and Courses for PostgreSQL , MangoDb Redis and Elacticsearch will increase and demand of Microsoft SQL Server and SQLite will decrease
- Large no. of job opportunities will be coming from United States with India , Germany



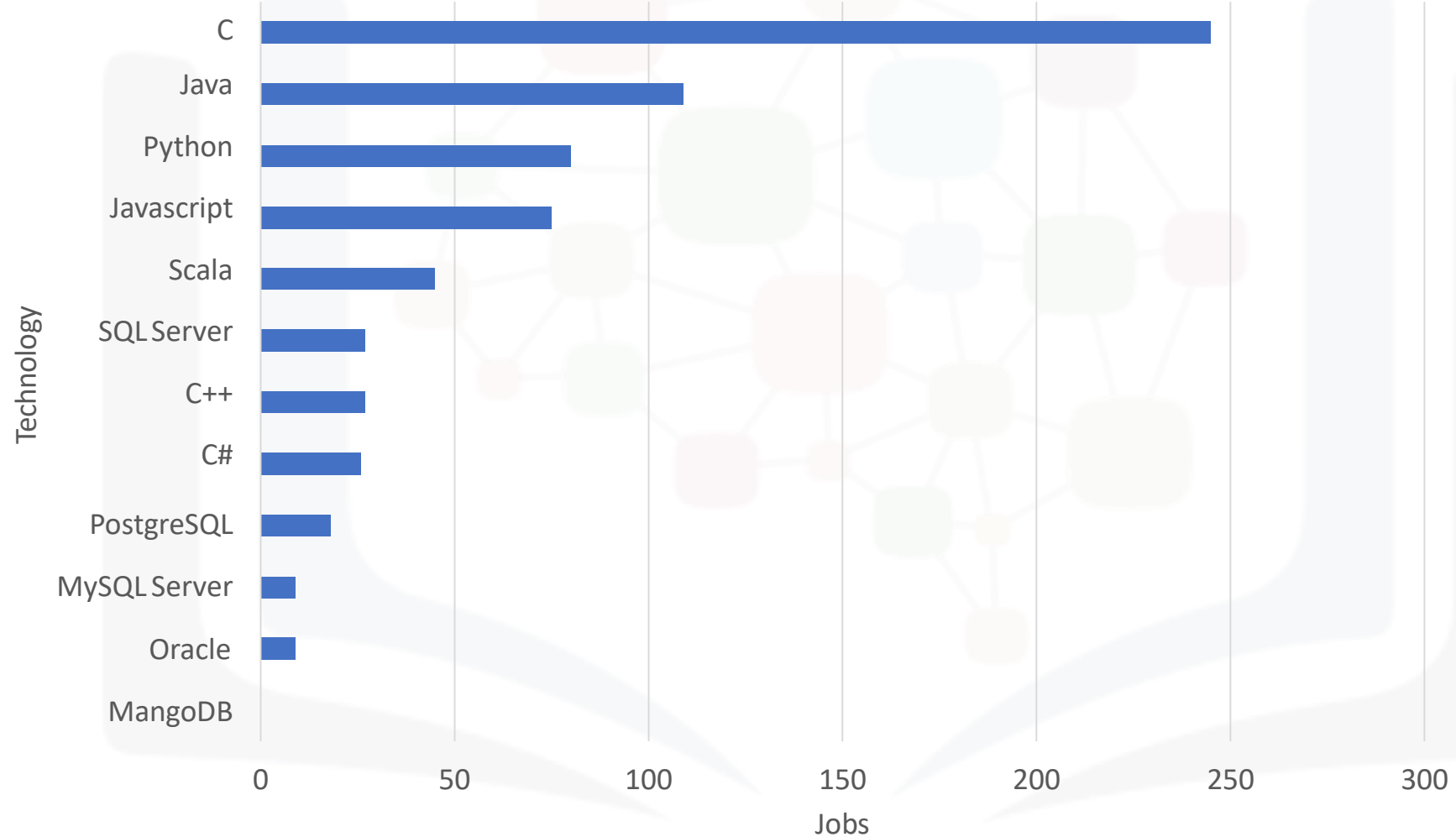
# APPENDIX



LanguageWorkedWith	Respondent
Assembly	437
Bash/Shell/PowerShell	4,642
C	1,578
C#	4,288
C++	1,946

11.4K  
Respondent

# GITHUB JOB POSTINGS



# POPULAR LANGUAGES

