



# Capstone Project

## *Stack Overflow*

### *Developer S*

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24/2/2022

# OUTLINE

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

# EXECUTIVE SUMMARY

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- ***Current Technology Usage***

Top 10 Languages Worked with

Top 10 Database Worked with

Platform worked with Word-Cloud

Top 10 Web-frame Worked with

- ***Future Technology Trend***

Top 10 Languages Desired Next Year

Top 10 Database Desired Next Year

Platform worked with Desired Next Year

Top 10 Web-frame Desired Next Year

- ***Demographics***

Respondents Classified by Gender

Respondent Count for Countries

Respondent Count by Age

Respondent Count by Gender by Formal Education Level

# INTRODUCTION

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- The top 10 Programming Languages in demand
- The top 10 database skills in demand.
- The top Platformed utilization.
- The top 10 Web-frame platform in demand

# METHODOLOGY

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- Collecting Data- *Stack Overflow Developer Survey -2019*
  - Using – API.
  - Using – Web-scraping.
- Exploring Data
  - Finding Duplicates & Removing Duplicates.
  - Finding & Imputing Missing Value.
  - Normalizing Data.
  - Handling Outliers.
  - Correlation
- Visualization Data
  - Visualization Distribution, Relation, Composition & Comparison of data.
  - Building Dashboard.

# RESULTS

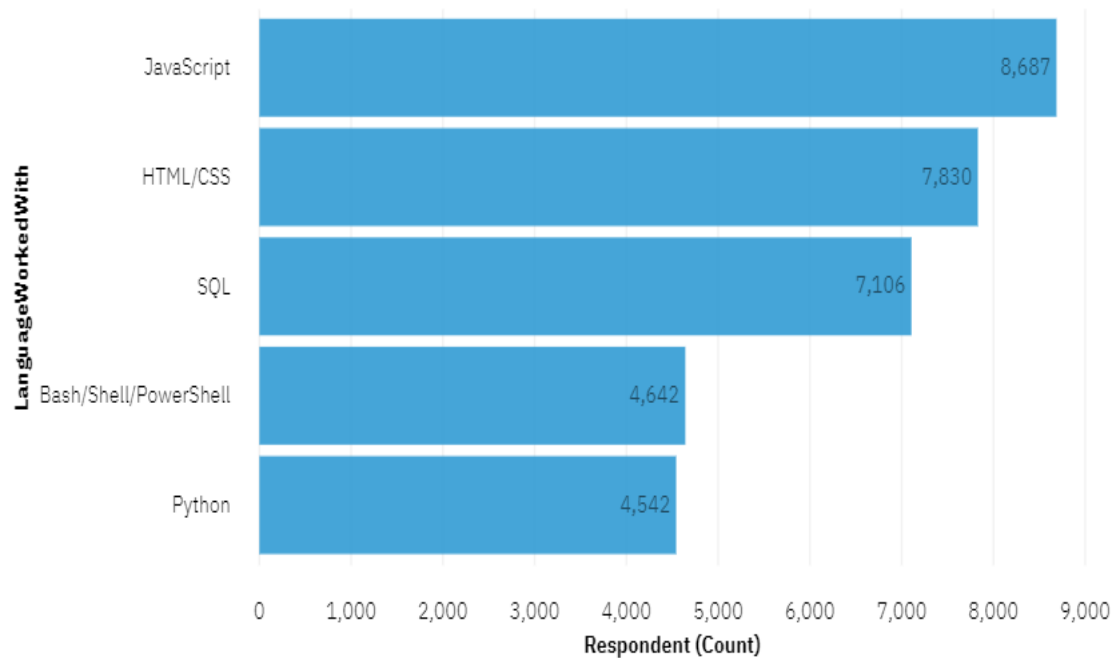
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# PROGRAMMING LANGUAGE TRENDS

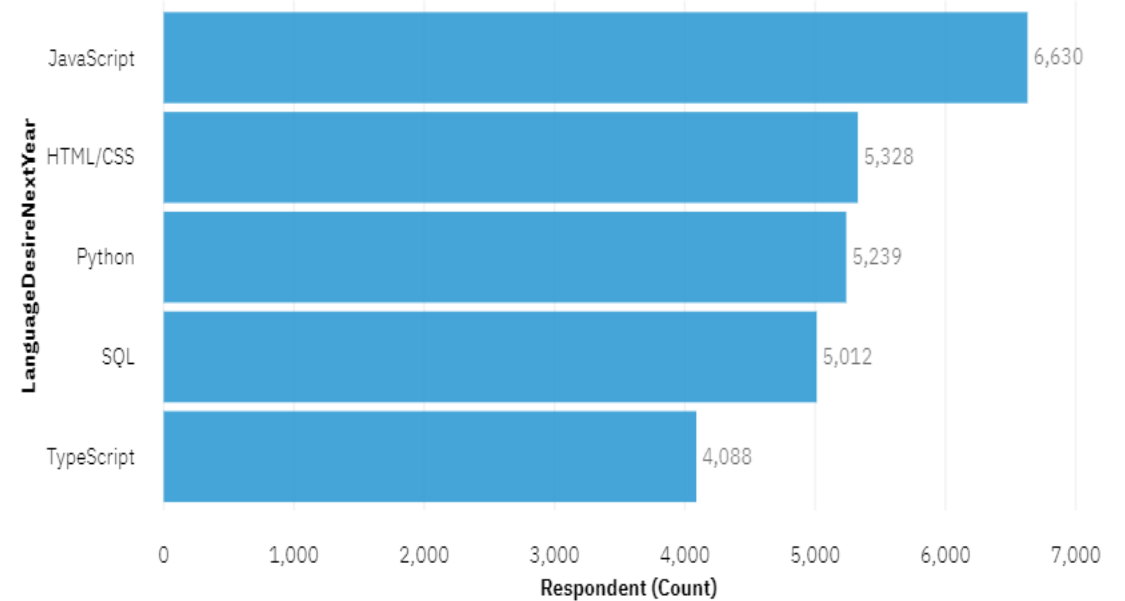
## Current Year

### Top 5 Languages Worked with



## Next Year

### Top 10 Language DesiredNextYear



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## *Findings*

- Java-script appears to be popular choice for current as well future years.
- Web Assembly comes as least popular for current years and VBA appears least choice for next year
- Python and SQL appears to be evergreen mid popular choice for current and next year respectively

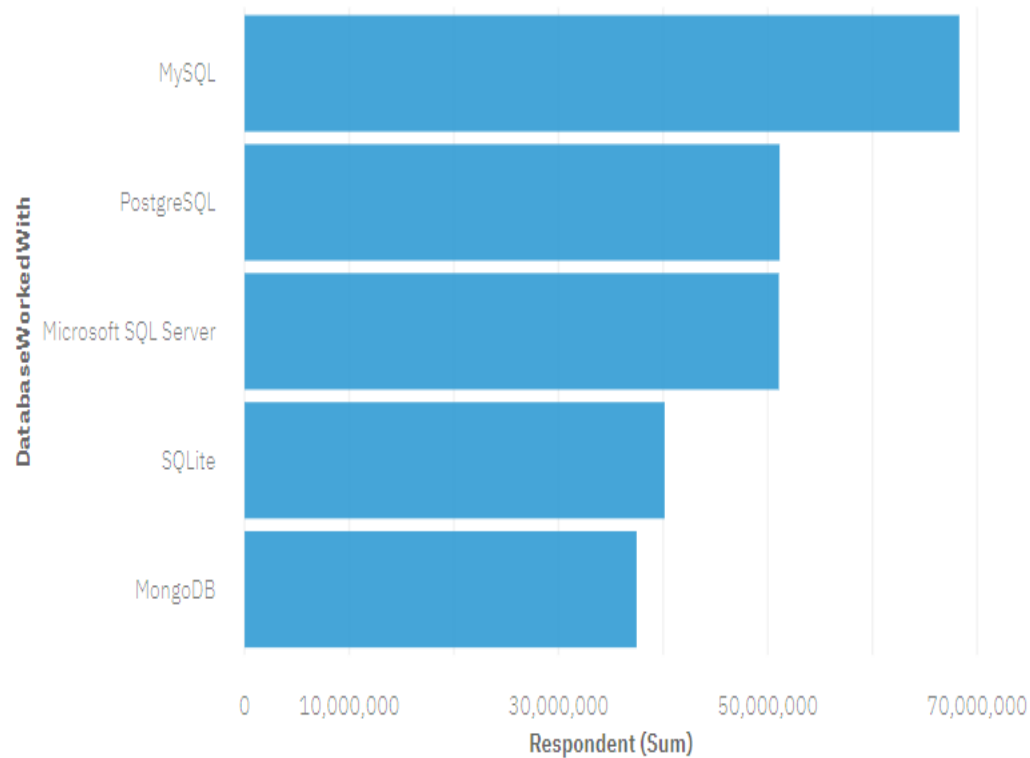
## *Implications*

- Java-script is becoming the new upcoming popular demanding programming language among users.
- Web Assembly and VBA has been replaced by other programming languages at most places.
- Python and SQL appears to be evergreen demand Programming languages.

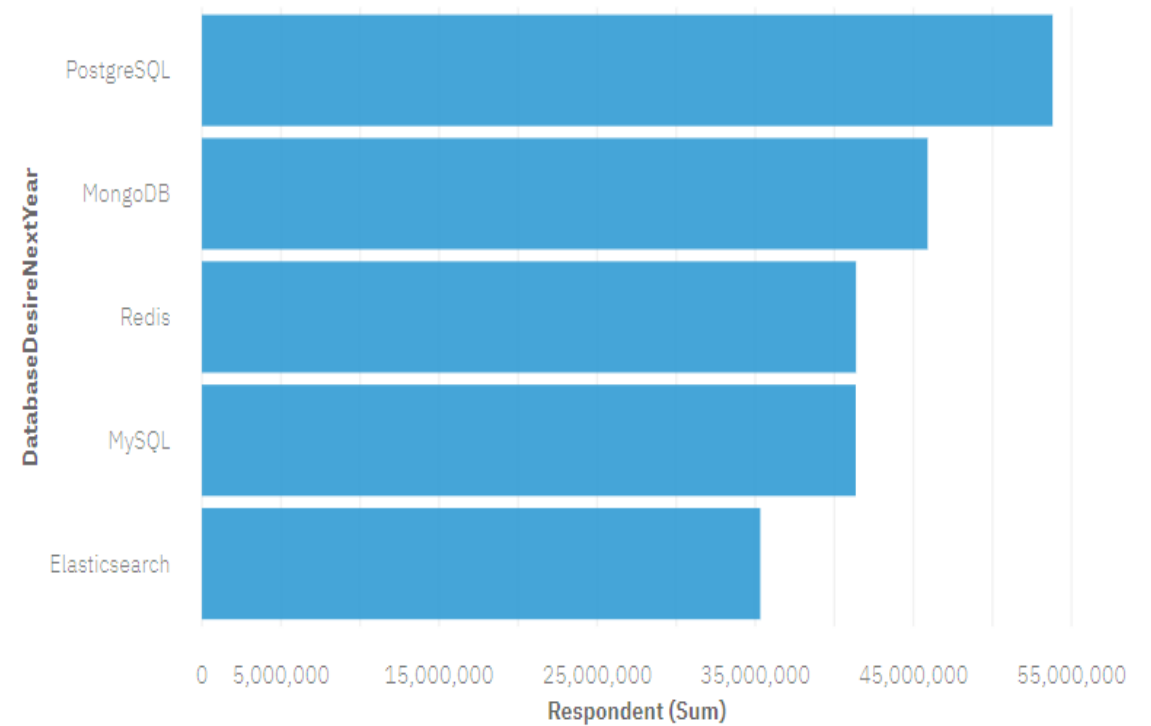


# DATABASE TRENDS

Top 5 Database current Year



Top 5 Database Desired Next Year



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## *Findings*

- MySQL comes out to be popular choice for current whereas PostgreSQL overcomes every other in case of desired next year choice.
- Couchbase comes as least popular for current years as well as for next year as well.
- Elasticsearch, Redis & MongoDB comes out to show progressive trends in upcoming years whereas MySQL shows declining trend as compared to current-next years charts.

## *Implications*

- PostgreSQL is becoming the new upcoming popular desired database skills among users replacing MySQL.
- Couchbase has been replaced by other programming languages at most places.
- Elasticsearch, Redis & MongoDB appears to be more popular desired choice as compared to MySQL.

# DASHBOARD

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The permanent link of the read-only view of the Cognos dashboard is as follows –

<https://dataplatform.cloud.ibm.com/dashboards/ef366ecd-2ab9-404b-8997-66e0eb961ac4/view/6e12d01f65ab75dc67e5cce407982e0629632154e1bb8755d4d07b495b657597a93a17c0c8274b5d8f445735f1e4405d9f>

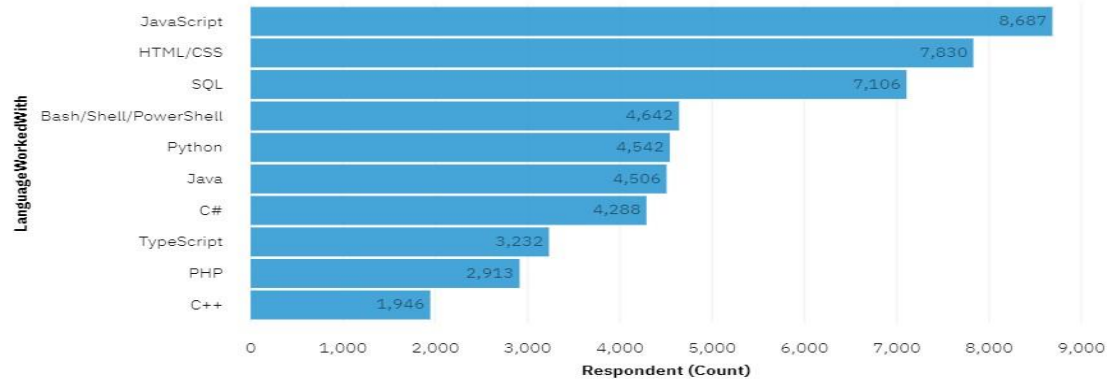
# DASHBOARD TAB 1

Current Technology Usage

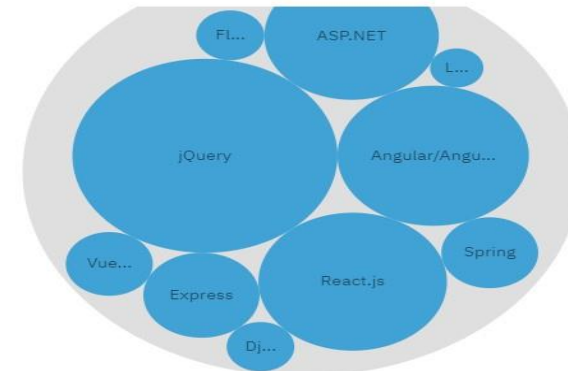
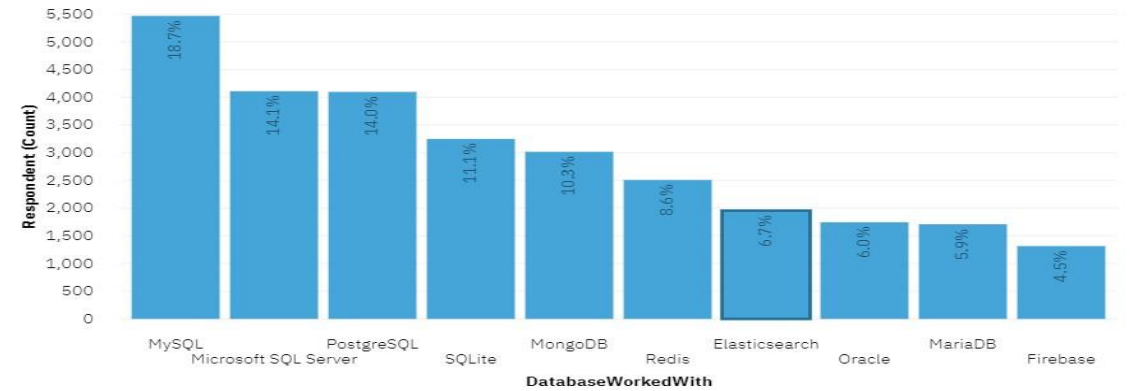
Future Technology Trend

Demographics

## Top 10 Languages Worked with



## Top 10 Database Worked with



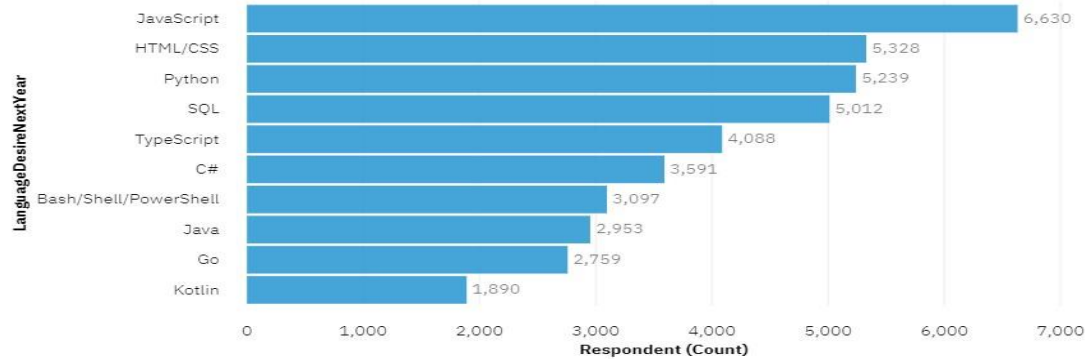
# DASHBOARD TAB 2

Current Tecnology Usage

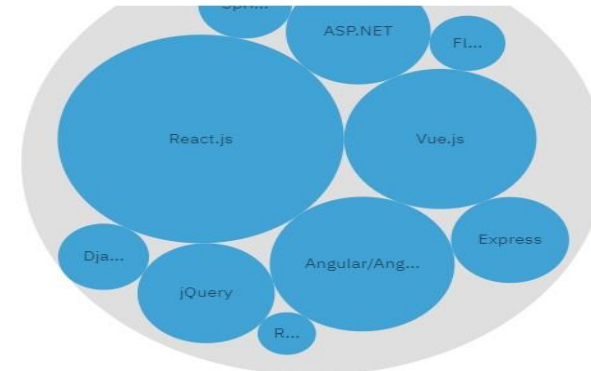
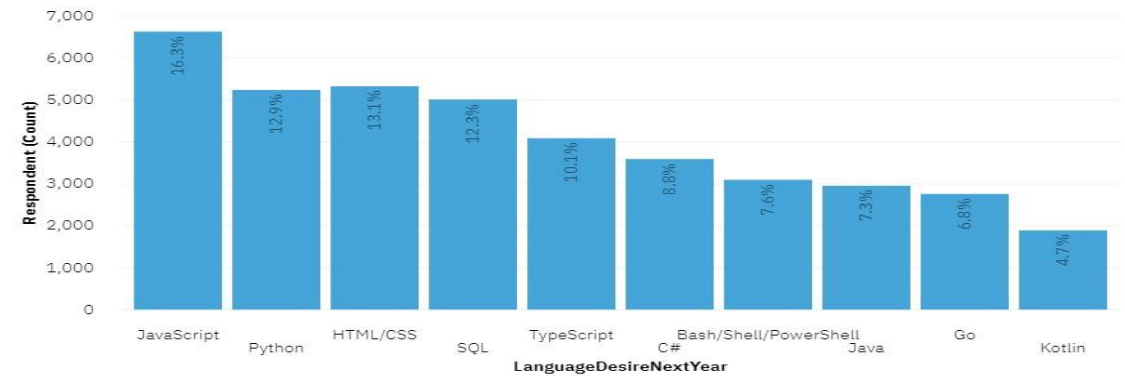
Future Technology Trend

Demographics

Top10 Language DesiredNextYear



Top 10 Language Desired Next Year



# DASHBOARD TAB 3

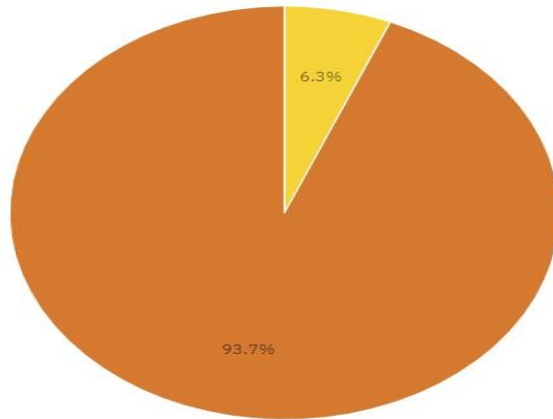
Current Tecnology Usage

Future Technology Trend

Demographics

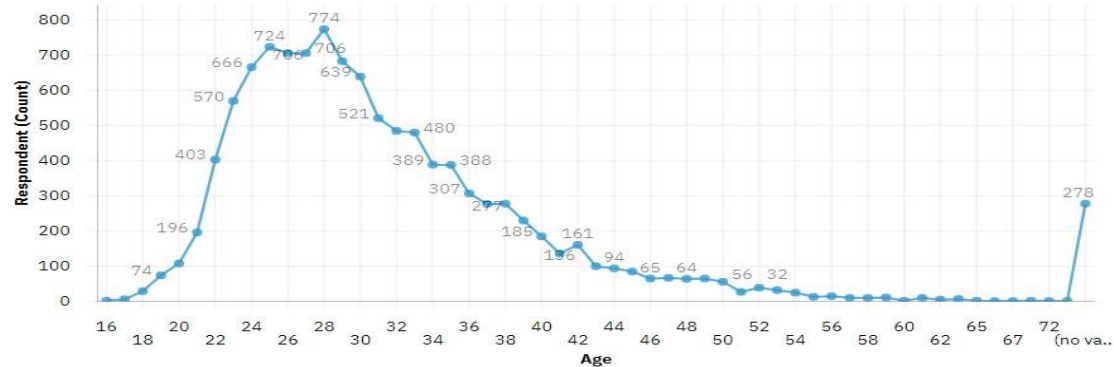
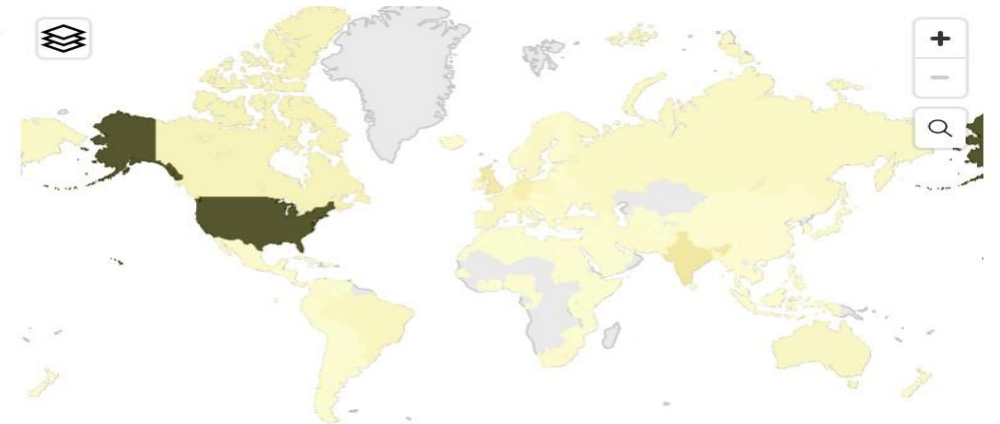
## Respondents Classified by Gender

Gender  
Woman  
Man

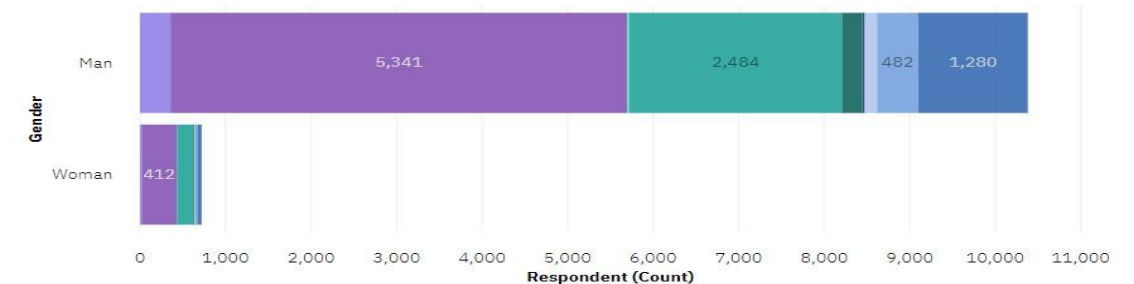


## Respondent Count for Countries

Respondent (...)  
3,058  
1



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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- All age used for survey
- All gender considered for survey.
- People from different countries were asked for survey.
- Various education level people were included as well.

# OVERALL FINDINGS & IMPLICATIONS

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## Findings

- The upcoming programming trend is for advanced programming languages.
- The upcoming trend for databases is non-relational databases mostly.

## Implications

- People are looking for advanced programming languages with easy learning in focus.
- People are looking for big data because it seem to have great future.



# CONCLUSION

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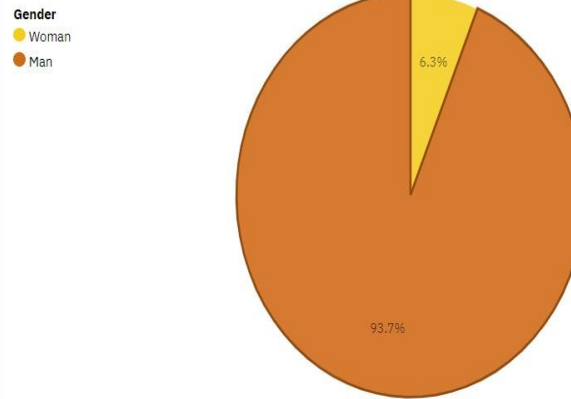


- The top programming language in demand  
Present & Future- Java-script.
- The top database skills in demand  
Present – MySQL ; Future – PostgreSQL.
- Popular Platform  
Present – Windows ; Future – Linux Docker
- The top Web-frame in Demand  
Present – jQuery ; Future – React.js

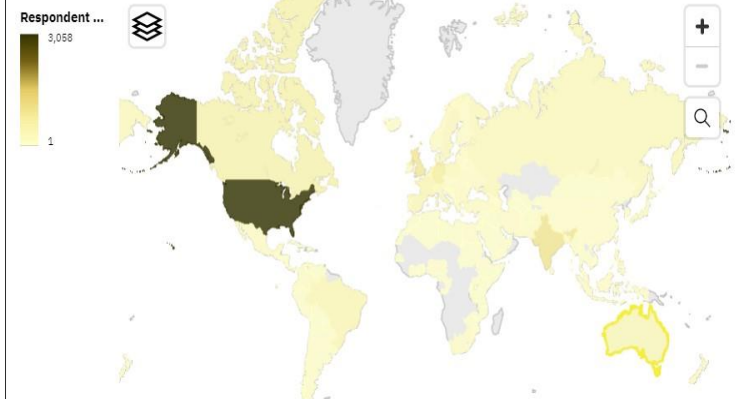
# APPENDIX



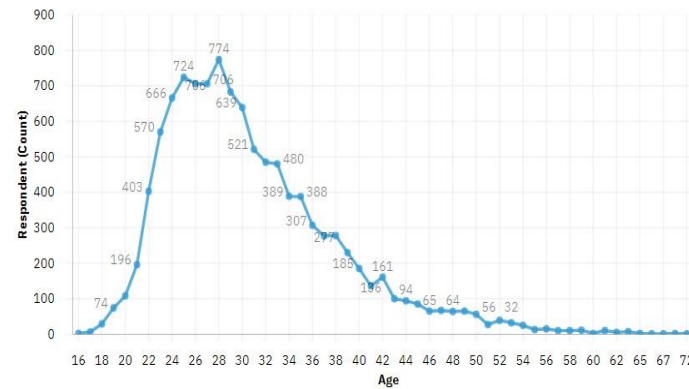
Respondents Classified by Gender



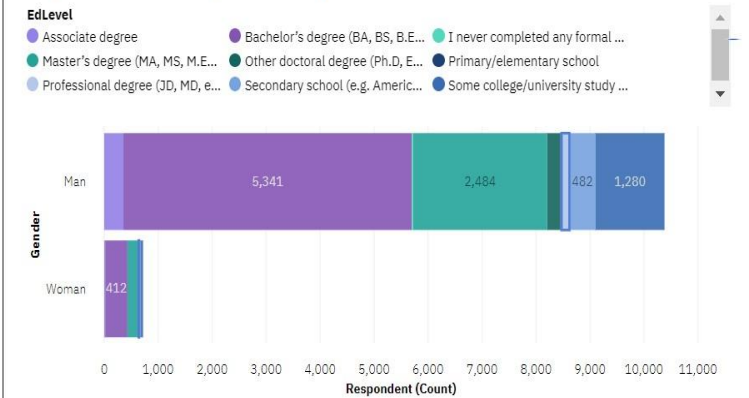
Respondent Count for Countries



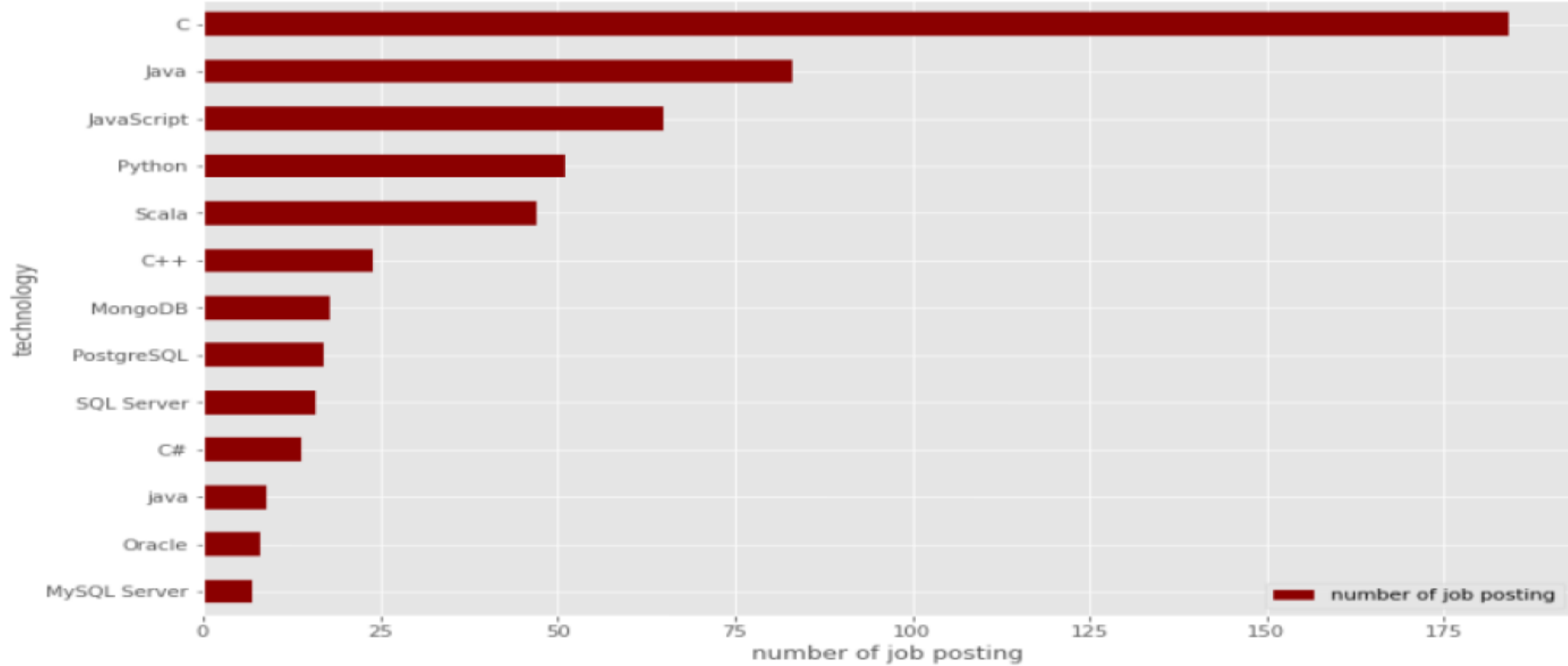
Respondent Count by Age



Respondent Count by Gender by Formal Education Level



horizontal bar of number of job postings



GITHUB JOB POSTINGS

IBM Developer

SKILLS NETWORK 

# POPULAR LANGUAGES

