



# Analyzing Information Technology Trends

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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 current Software Development
  - Programing Languages
  - Databases
  - Platform
  - Web Frame work
- Analyzing Future Trends
- Demographics Survey
  - Technological gaps between Countries
  - Genter gaps in Jobs

# INTRODUCTION

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## **About:**

Analyzing Trends In Software Development

## **Purpose:**

Identifying Skills requirement in Next year

What are all the top 10 programming languages in demand?

What are the top 10 database skills in demand?

What are the IDEs popular in future?

**Audience:** Human Resource and IT head

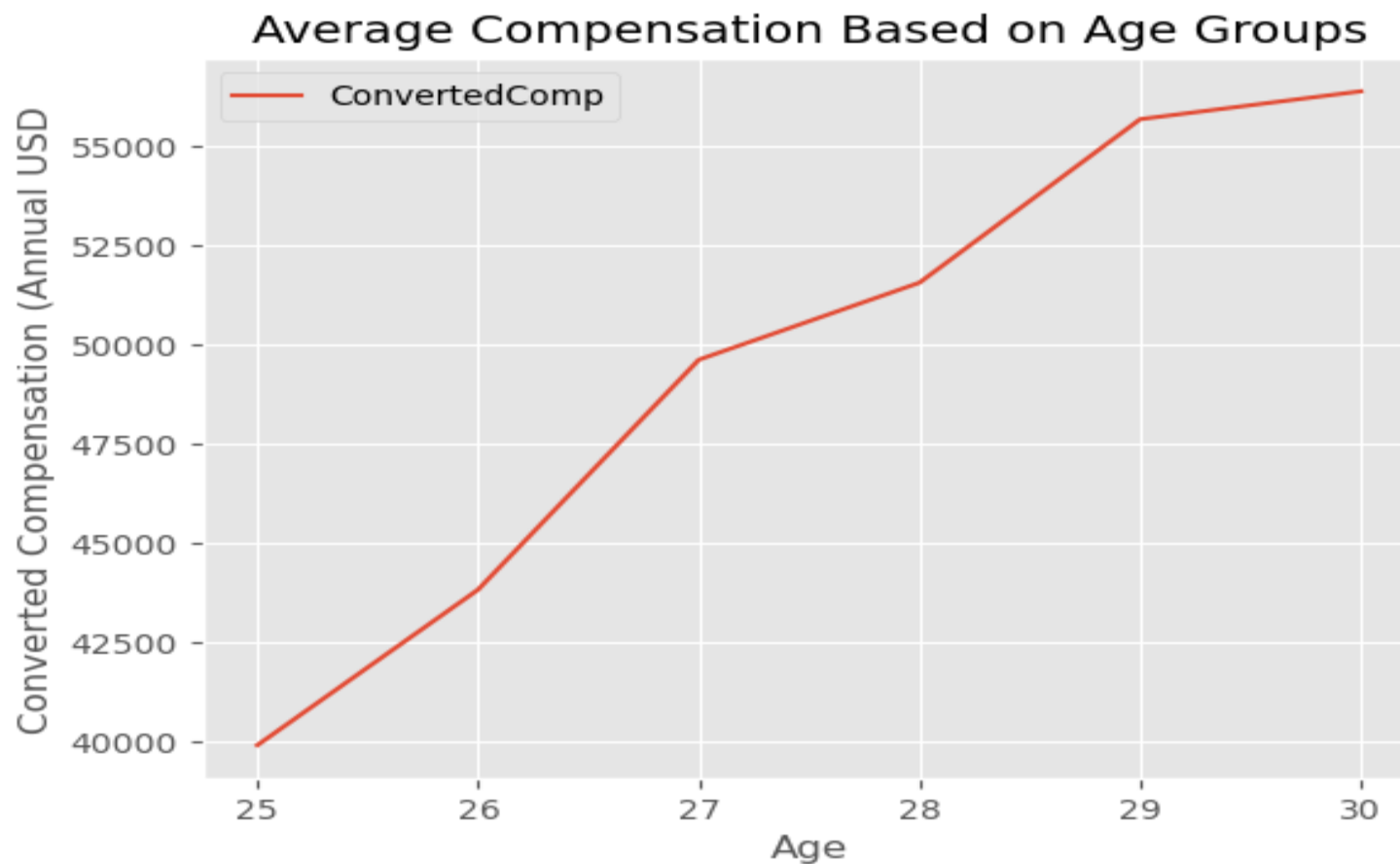
# METHODOLOGY

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- Data Collection Resources:
  - Stack Overflow Survey Developer 2019
  - GitHub Job Postings
  - Developers Annual Salary based on Programming Languages
- Explore Data
- Data Cleaning
- Exploratory Analysis
- Data Visualization
- Presentation

# RESULTS

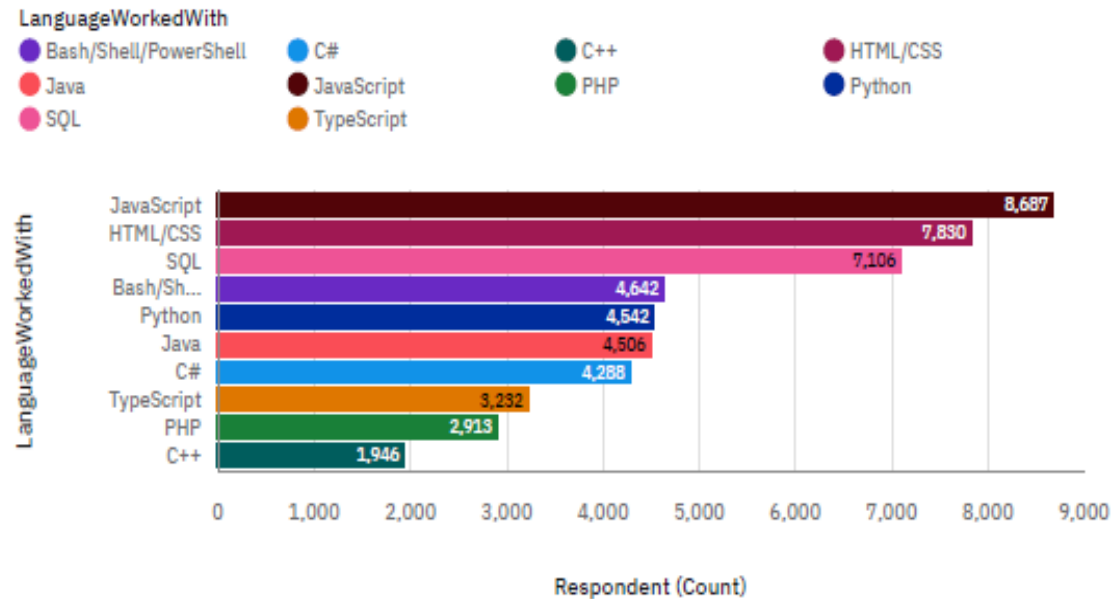


# PROGRAMMING LANGUAGE TRENDS

## Current Year

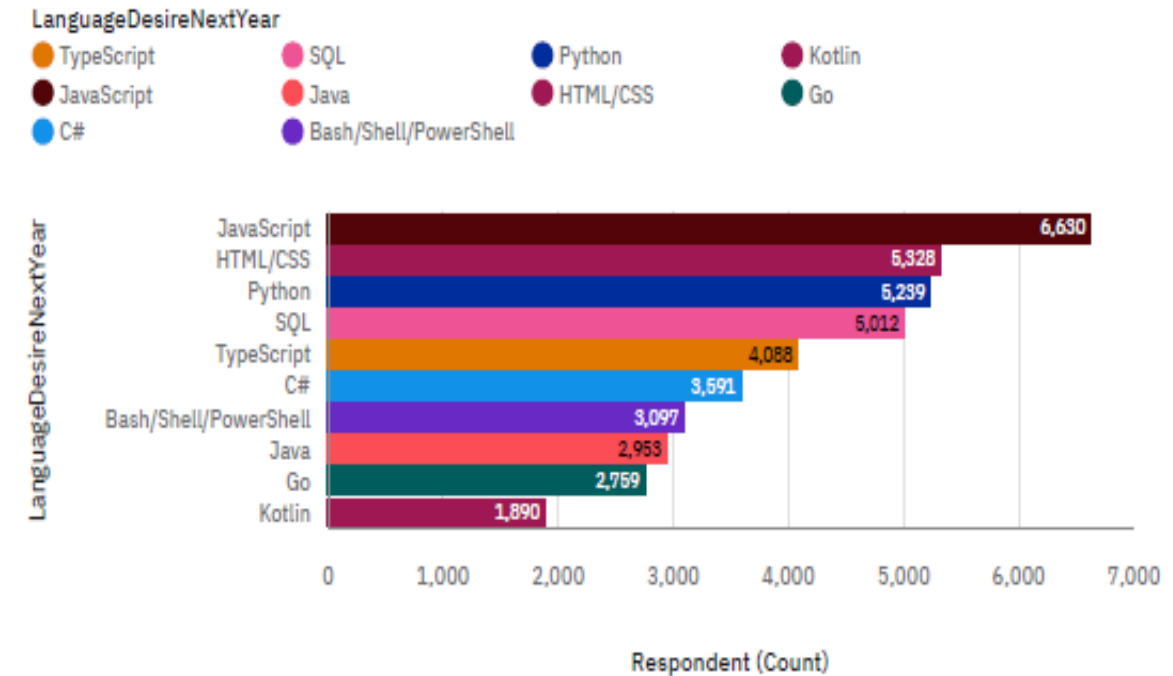
### Current Technology Usage

#### Top 10 Languages Worked by Respondents count



## Next Year

### Top 10 Languages Desire Next Year by Respondents count



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- JavaScript, Html/CSS, SQL, Bash and Python are in high demand currently
- Next year Python will gain more popular next year
- Power shell will get less popular in next year

## Implications

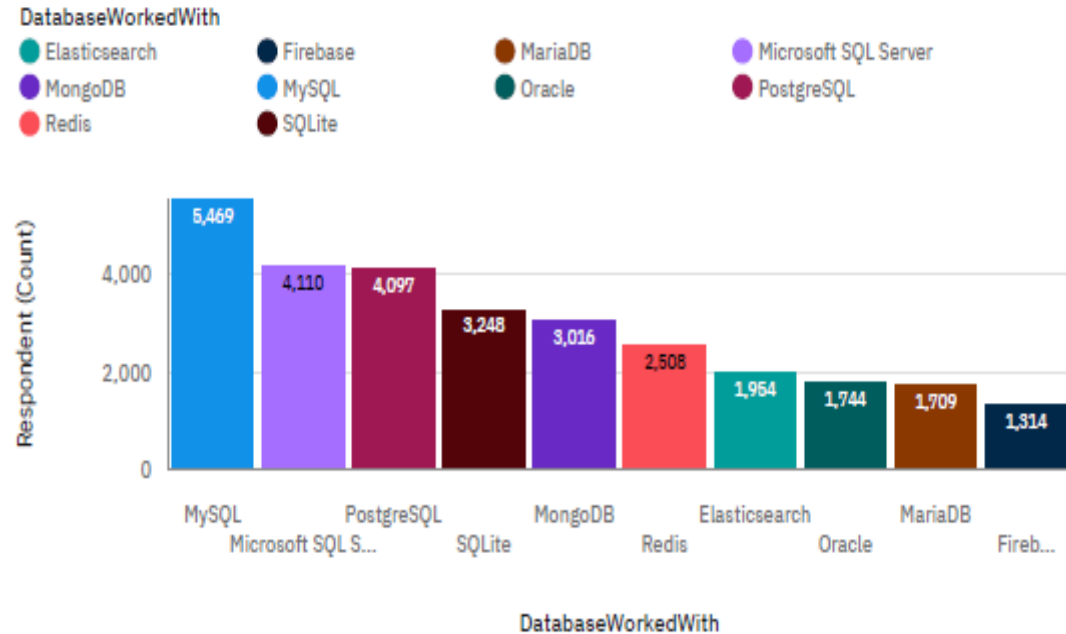
- JavaScript, Python and HTML/CSS will both have demand in current and future years.
- Web development as a tech skill will get spot light for future and high in demand
- SQL is still a most relevant language for Data professionals. So, it is most important as a Data Analyst and Business analyst, SQL is one of the key skill



# DATABASE TRENDS

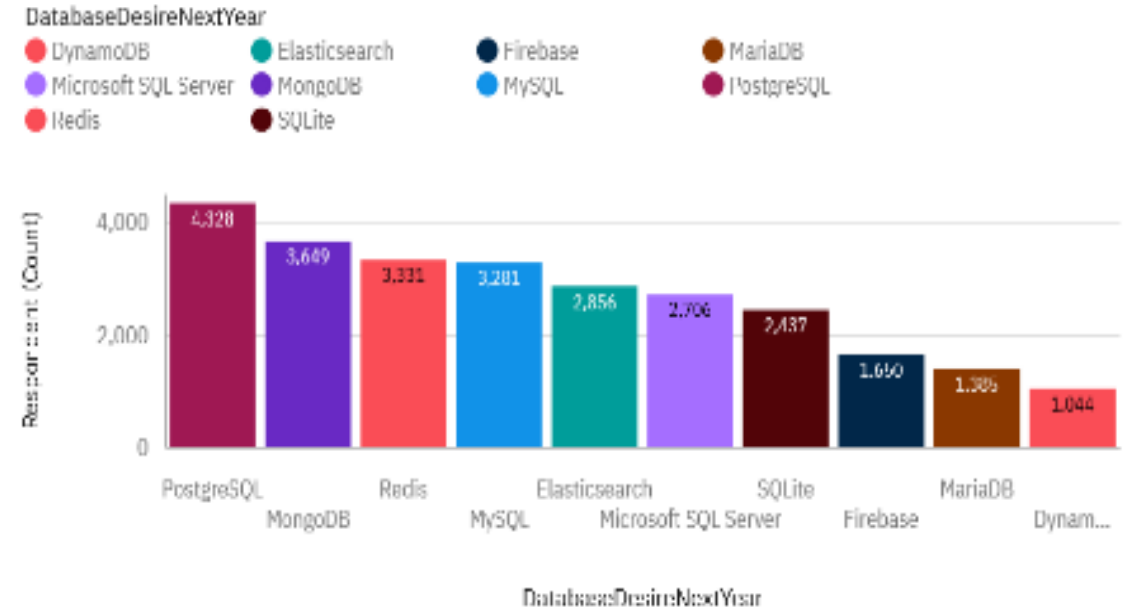
## Current Year

Top 10 Databases Worked by Respondents count



## Next Year

Top 10 Databases Desire Next Year by Respondents count



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- MySQL, Microsoft SQL, PostgreSQL, SQLite and MongoDB in top demand current year
- However Microsoft SQL goes behind next year and MongoDB, Redis, MySQL and ElasticSense will be most popular next year

## Implications

- People are highly interested in learn Non- Relational databases
- It is clear that big data will be most popular in next year
- SQL is still a top tool watch out for Data Specialist
- Oracle SQL will not among top 10. It is losing relevance as time passes

# DASHBOARD

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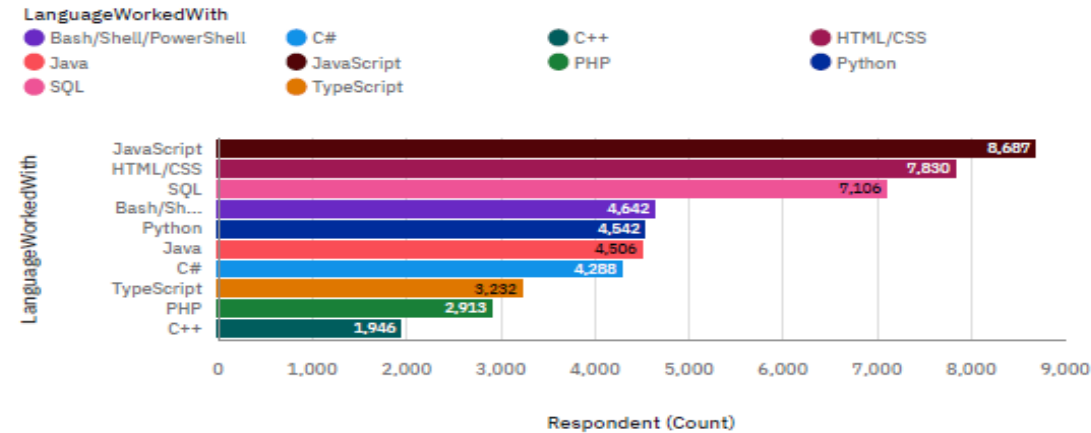


<https://github.com/Yashvee-M/IBM-Data-Analyst-IBM-Data-Analyst-Capstone-Project/blob/main/module5%20Building%20A%20Dashboard/Building%20A%20Dashboard.pdf>

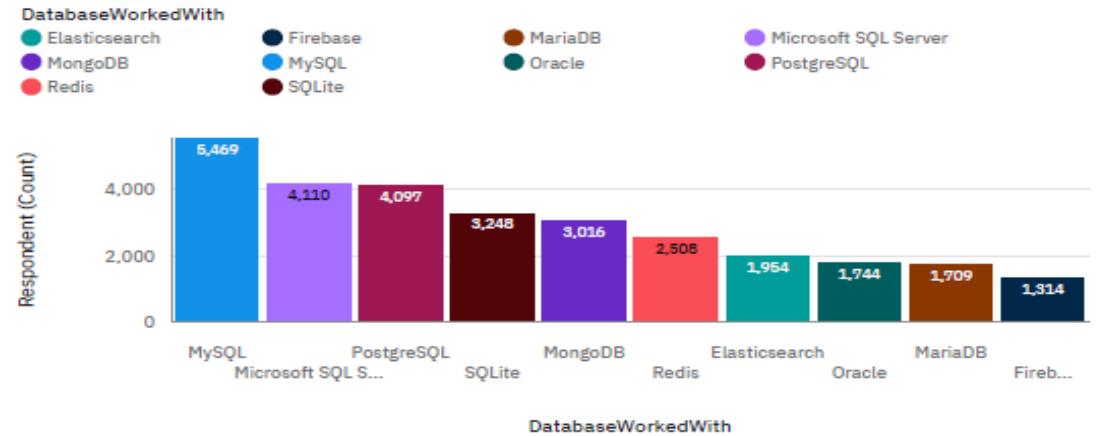
# DASHBOARD TAB 1

## Current Technology Usage

### Top 10 Languages Worked by Respondents count



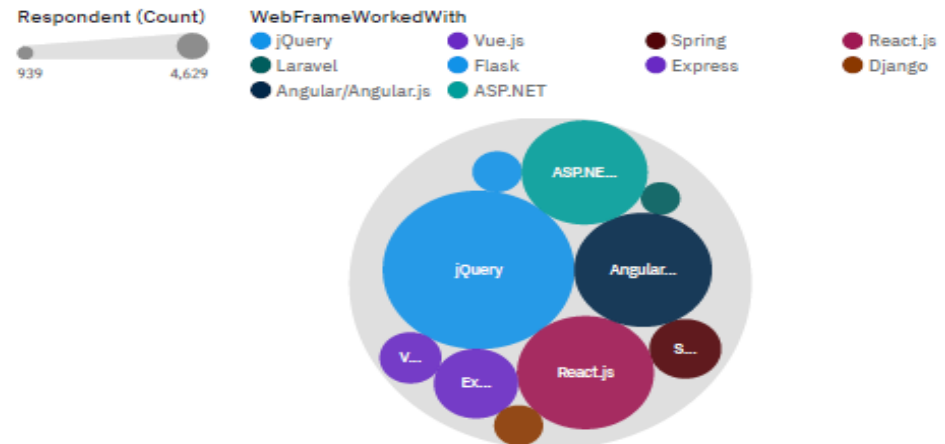
### Top 10 Databases Worked by Respondents count



### Platforms Worked With by Respondents count



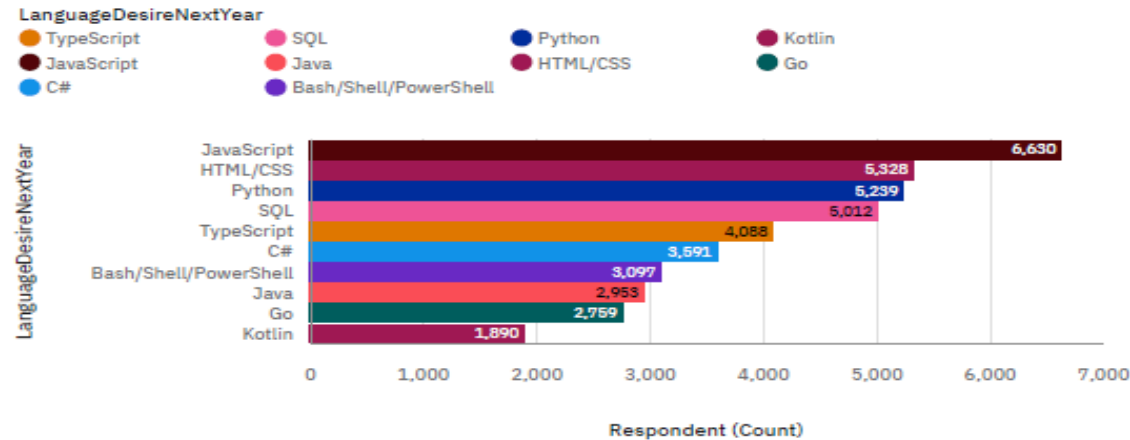
### Top 10 Web Frames Worked With by Respondents count



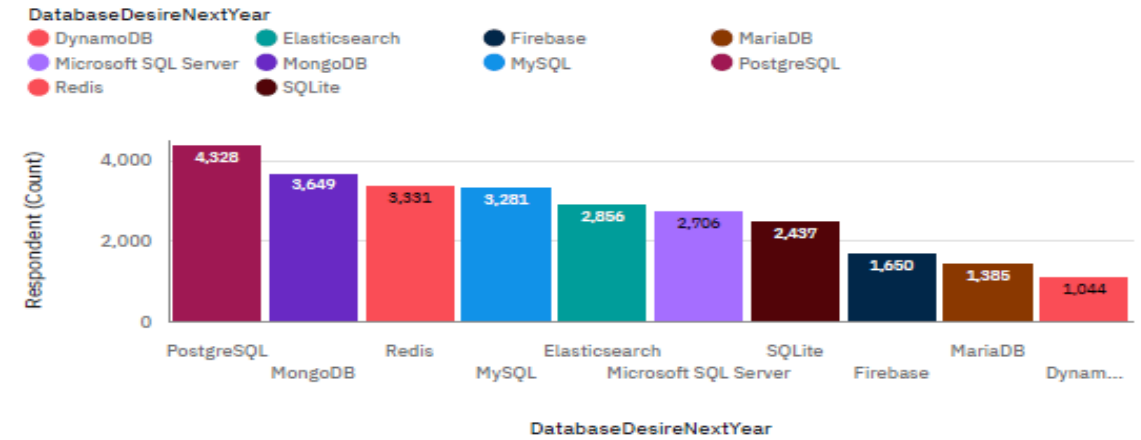
# DASHBOARD TAB 2

## Future Technology Trend

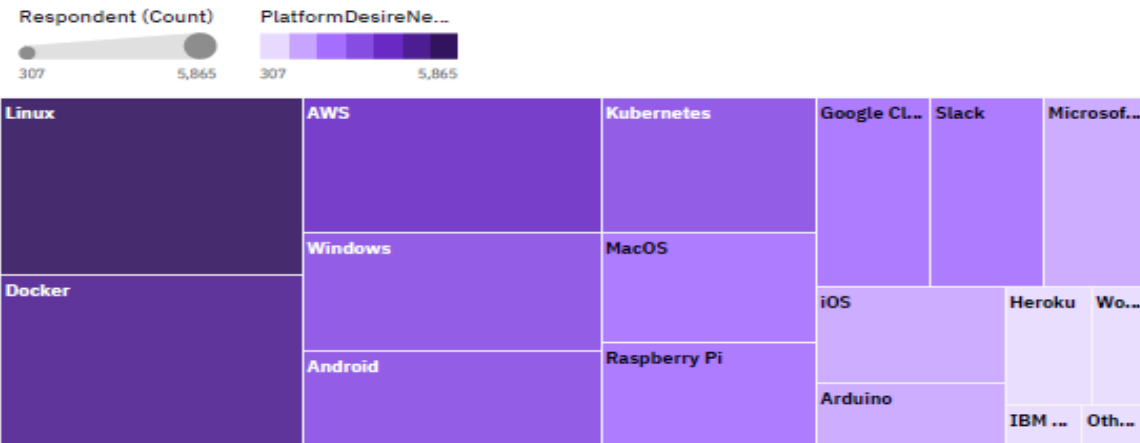
Top 10 Languages Desire Next Year by Respondents count



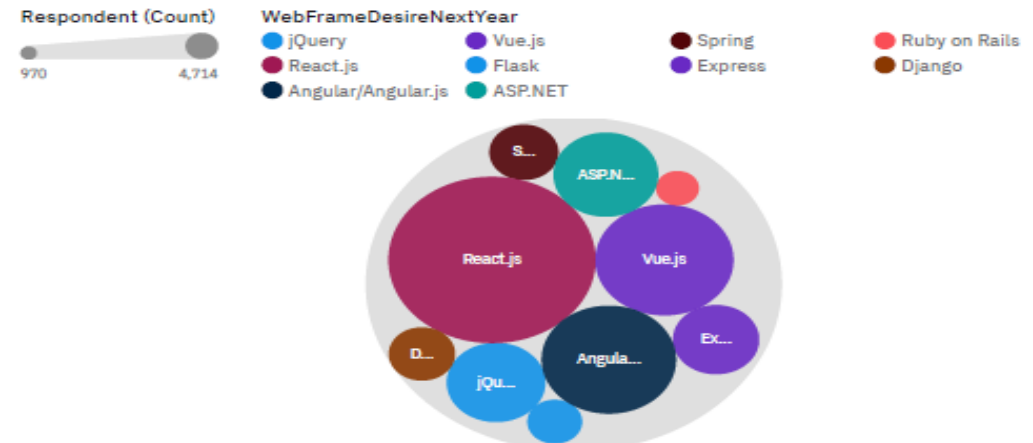
Top 10 Databases Desire Next Year by Respondents count



Platform Desire Next Year hierarchy by Respondents count



Top 10 Web Frames Desire Next Year Sized by Respondents count

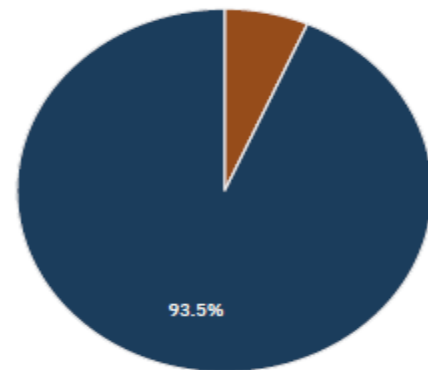


# DASHBOARD TAB 3

## Demographics

Respondent counts classified by Gender

Gender  
● Woman ● Man

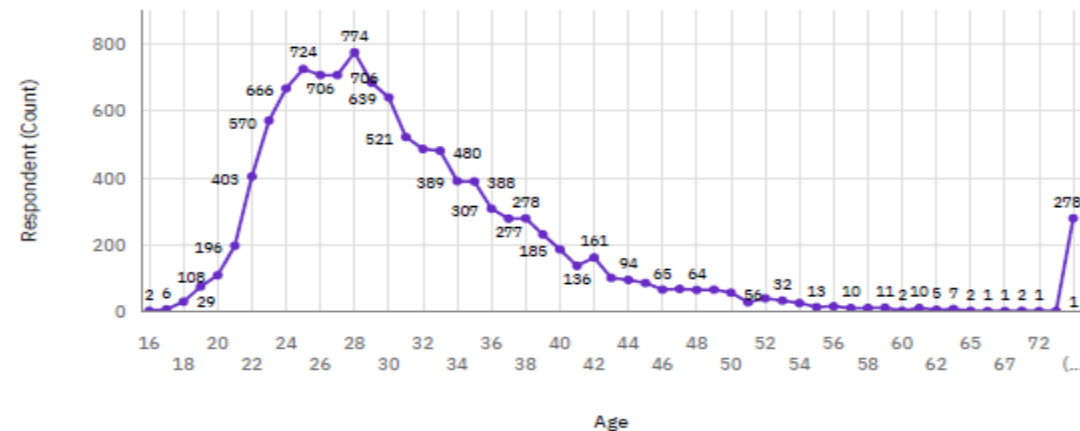


Respondent Count for Countries

Respondent (Count)  
1 3,058

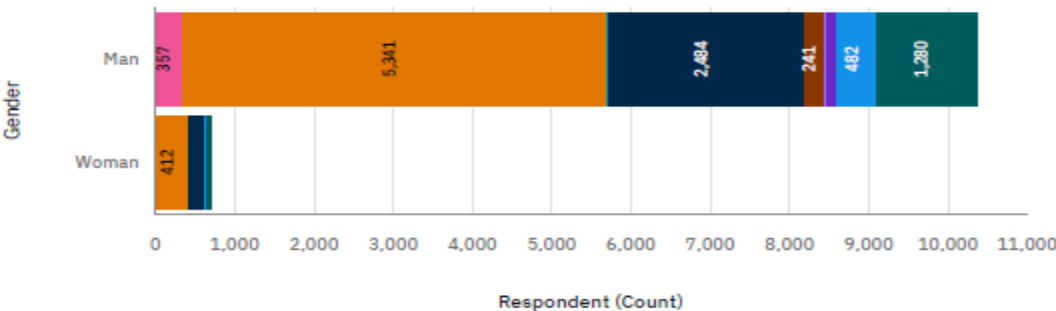


Respondent Count by Age



Respondent Count by Gender, classified by Formal Education Level

EdLevel  
● Associate degree ● Bachelor's degree (BA, BS, B.Eng....) ● I never completed any formal edu...  
● Master's degree (MA, MS, M.Eng.,....) ● Other doctoral degree (Ph.D, Ed.D... ● Primary/elementary school  
● Professional degree (JD, MD, etc.) ● Secondary school (e.g. American ... ● Some college/university study wit...



# DISCUSSION

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- Upskilling in the Technology sector
- How do we close the wide gender gap in the Technology sector
- Is completing a masters or doctorate degree really a requirement?
- The increasing demand for mobile development as Kotlin is getting popular
- More tech education, access and development regions in South east Asia, South America, Africa and some parts of Europe
- How relevant will Oracle SQL be in the future?

# OVERALL FINDINGS & IMPLICATIONS

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## Findings

- Most People in the IT field have a Bachelor's degree
- Web development languages are the most popular and On-demand tools in the IT field currently
- The tech sector is filled with the majority of young people under 40 years of age
- Most respondents want to learn Postgre SQL and React JS over Next year

## Implications

- It is important for data professionals to develop proficiency in NOSQL in addition to SQL databases
- Web development is still a very lucrative skill
- Less developed countries need more access to tech training and education
- People are looking for Big Data because data is everywhere



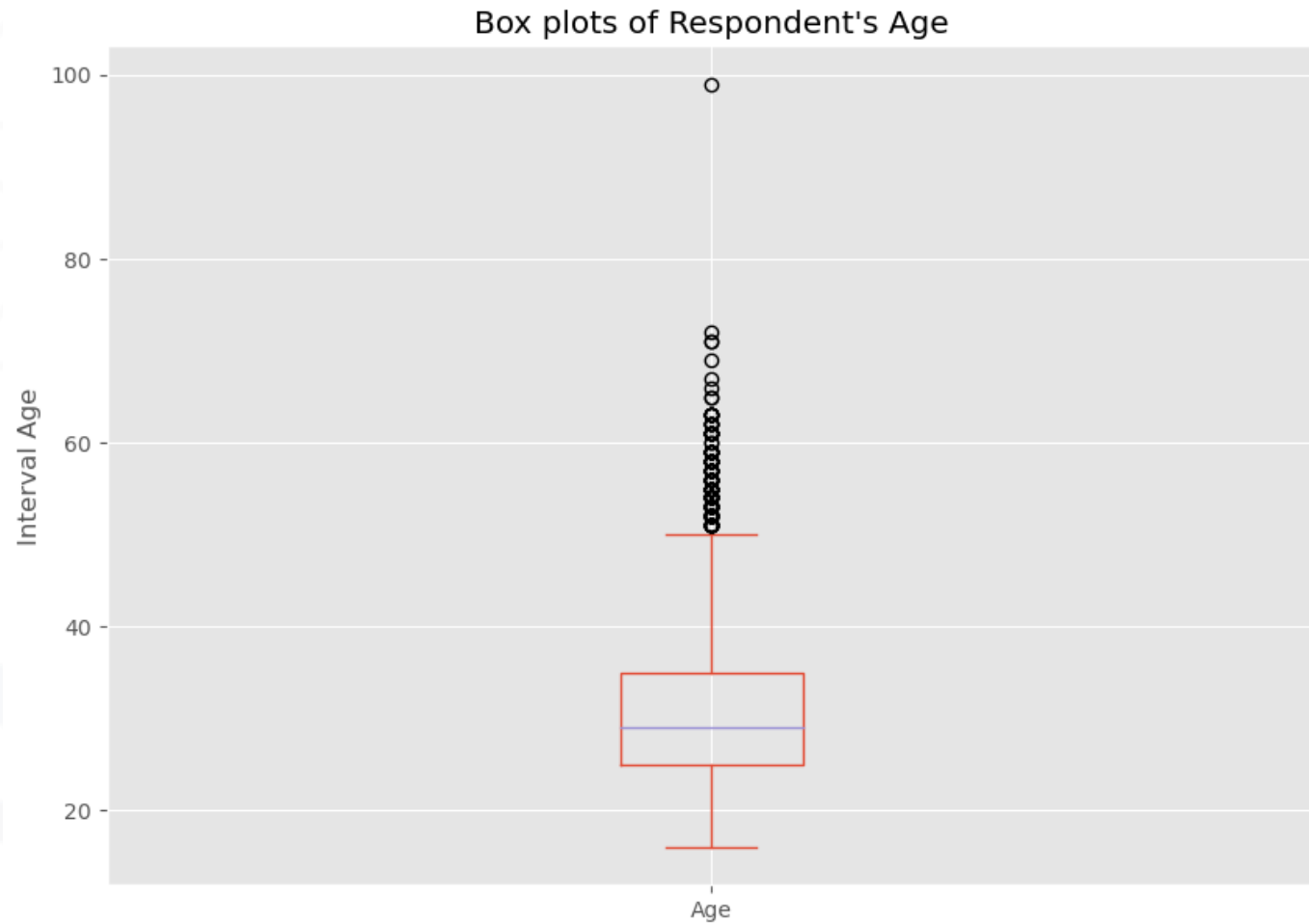
# CONCLUSION

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- It is expedient to update in Tech sector as the trends keep changing over time
- Web development skills are more demand
- Big Data with NoSQL gets more spotlight in future

# APPENDIX

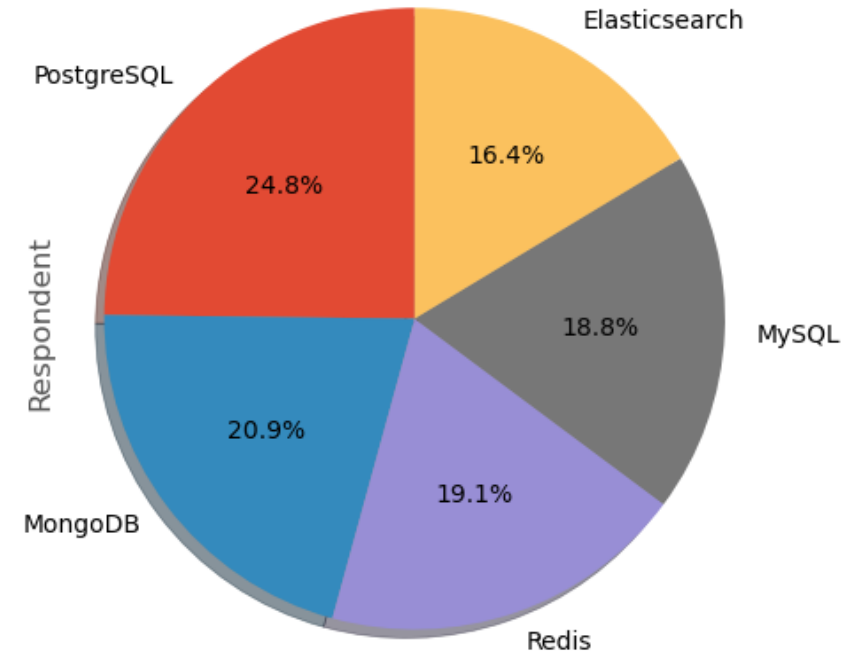


# APPENDIX

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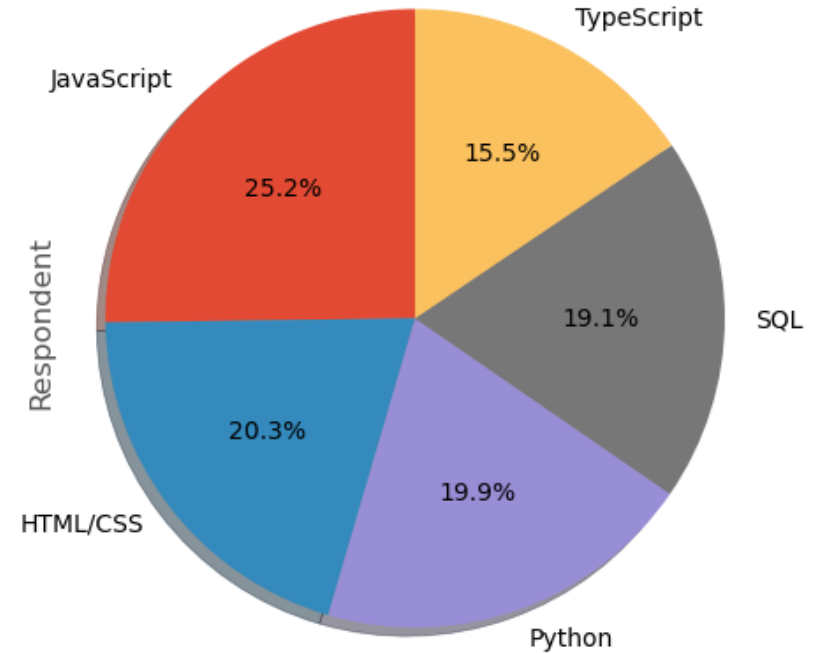
Top 5 Databases that Respondents Wish to Learn Next Year



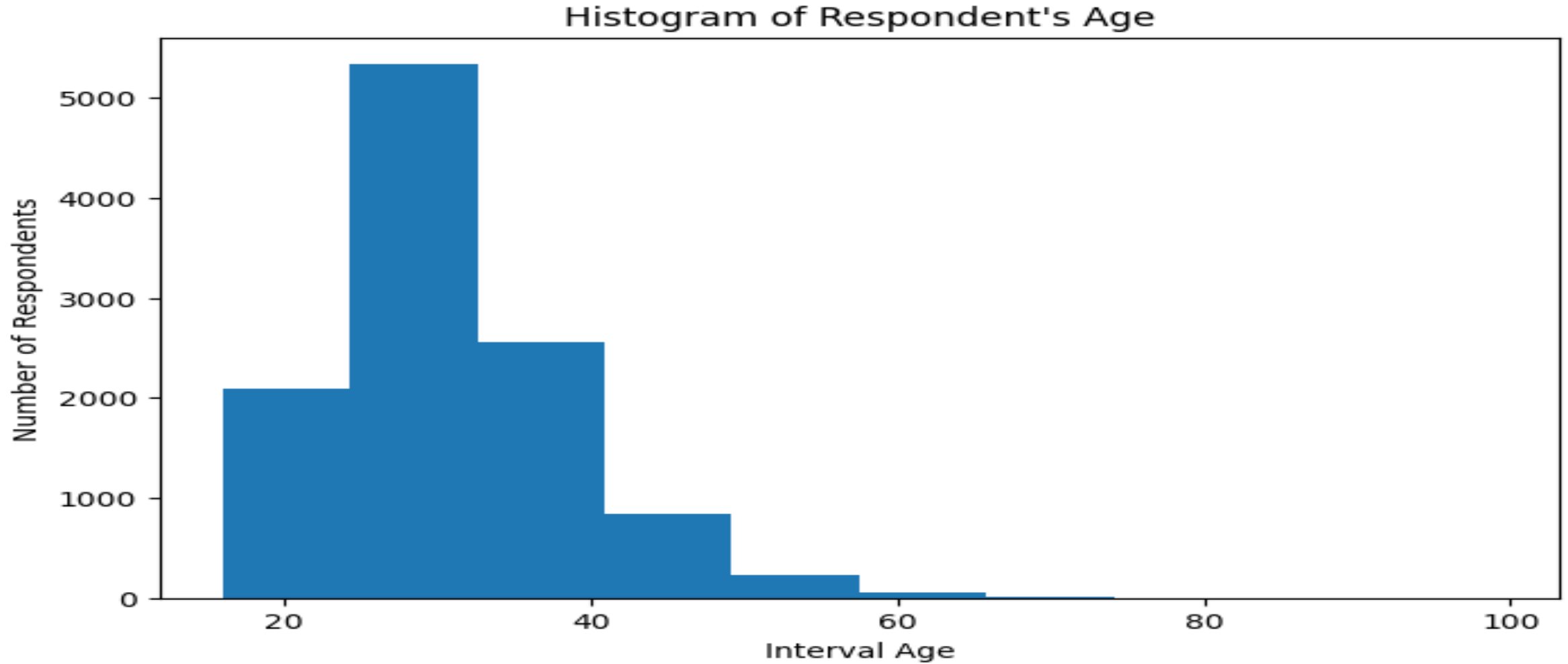
# APPENDIX



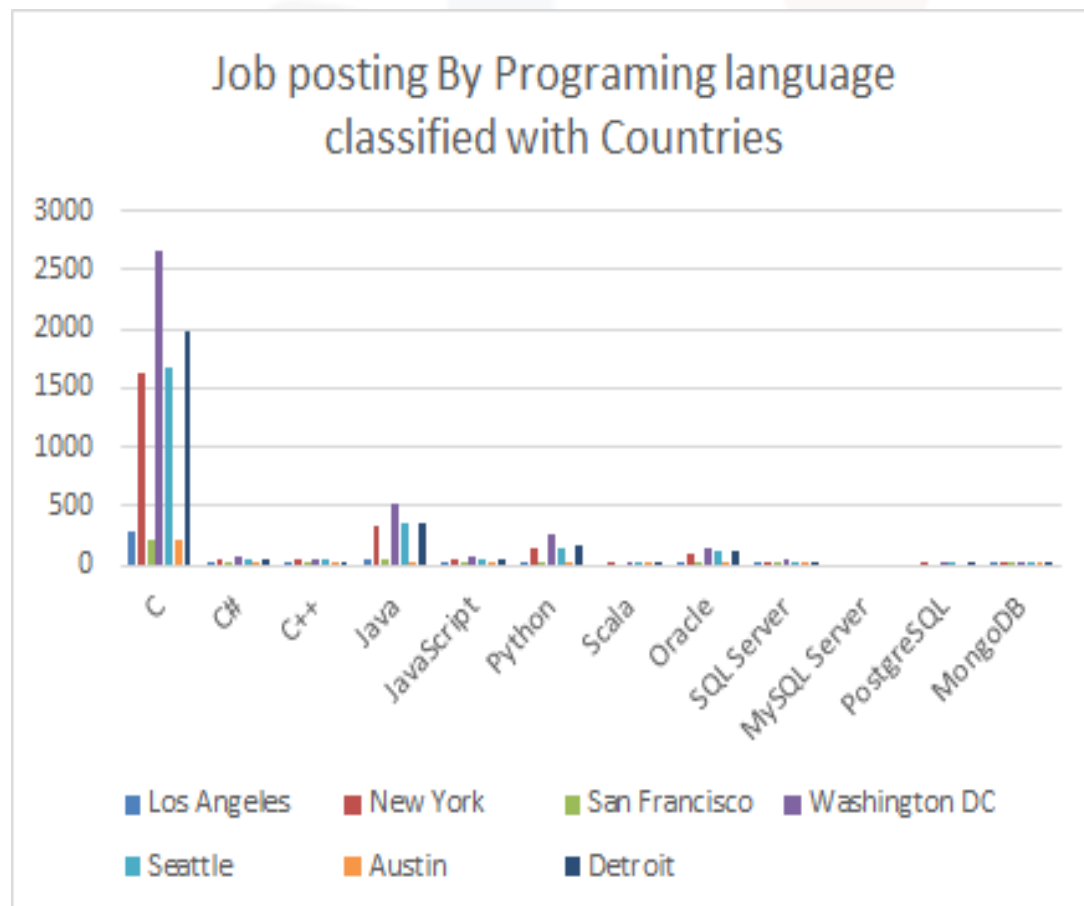
Top 5 Languages that Respondents Wish to Learn Next Year



# APPENDIX

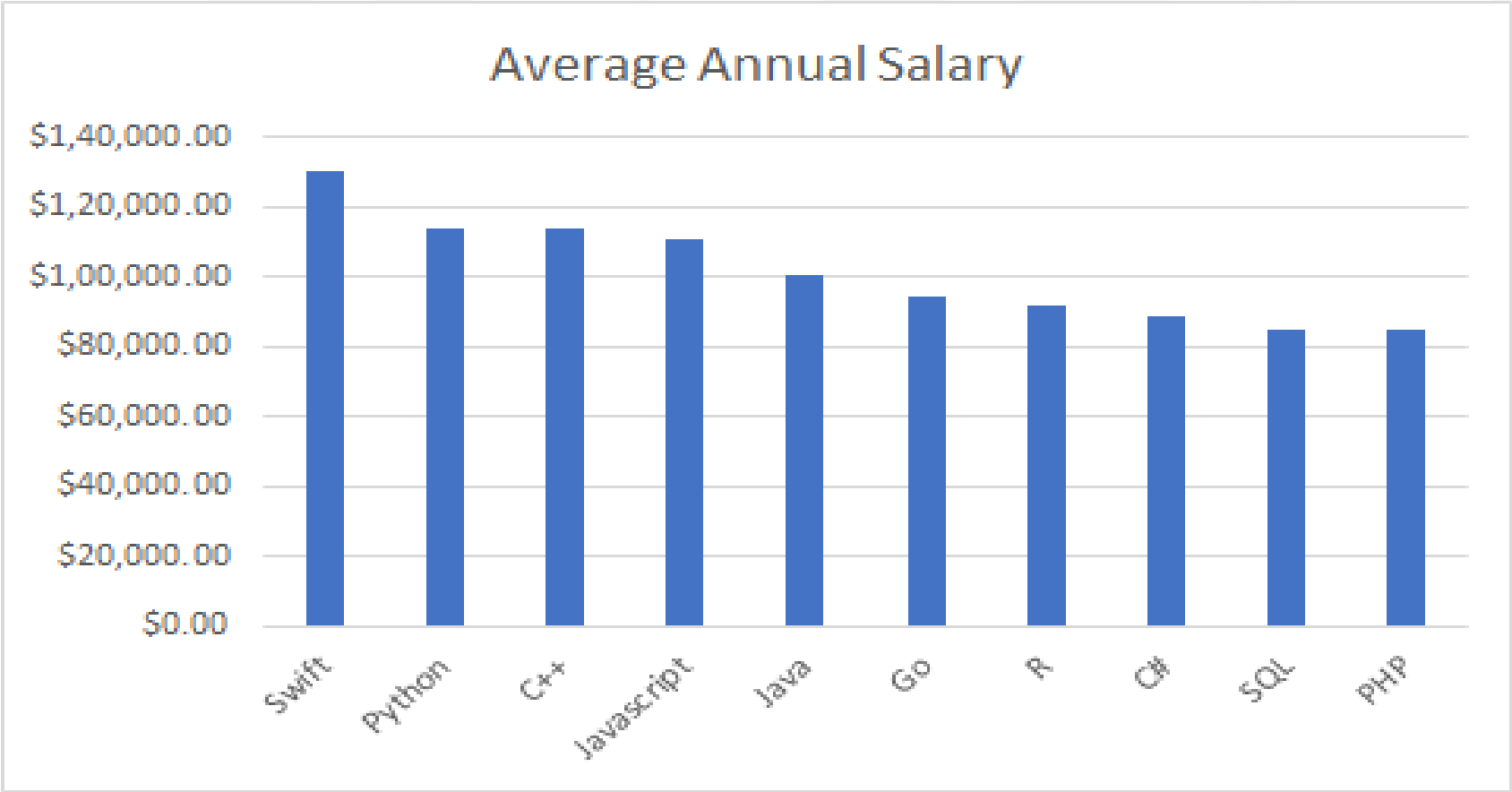


# JOB POSTINGS



Technology	Los Angeles	New York	San Francisco	Washington DC	Seattle	Austin	Detroit
C	296	1622	214	2664	1668	224	1973
C#	5	41	3	68	49	5	60
C++	3	43	3	55	41	4	32
Java	43	326	38	516	354	32	353
JavaScript	7	51	7	61	52	5	41
Python	24	143	17	258	133	15	170
Scala	0	8	0	3	4	1	5
Oracle	17	95	19	143	110	11	115
SQL Server	3	36	2	53	31	5	34
MySQL Server	0	0	0	0	0	0	0
PostgreSQL	0	1	0	3	1	0	2
MongoDB	2	25	2	32	21	1	25

# POPULAR LANGUAGES



1		Language	Average Annual Salary
2	1	Python	\$114,383
3	2	Java	\$101,013
4	3	R	\$92,037
5	4	Javascript	\$110,981
6	5	Swift	\$130,801
7	6	C++	\$113,865
8	7	C#	\$88,726
9	8	PHP	\$84,727
10	9	SQL	\$84,793
11	10	Go	\$94,082