



# Technology Trends Analysis

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# Outline

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



# Executive Summary

This Analysis yields insights regarding below trends

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## Current Technology Trends

- Language
- Database
- Platform
- Web frame

## Demographics



## Future Technology Trends

- Language
- Database
- Platform
- Web frame

# Introduction

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- The Objective of the developer survey is to gather data regarding technology usage and trends among developers in various countries.
- Analyse the rapidly changing technology world
- Lookout of developer skills in the past
- Identify the in-demand future trends in Programming language , Databases , Platform and Web frames.
- Audience :
  - IT Sector people(Developers & Programmers)
  - Computer Science Students

# Methodology

## □ Data Collection

Data sources are:

- Stack overflow website
- GitHub job profile

## □ Data Wrangling

SQL and Python's pandas  
library

## □ Data Exploration

Python Libraries

## □ Data Cleaning

Python Libraries

## □ Data Visualization

- Python Libraries
- IBM Cognos

## □ Presentation



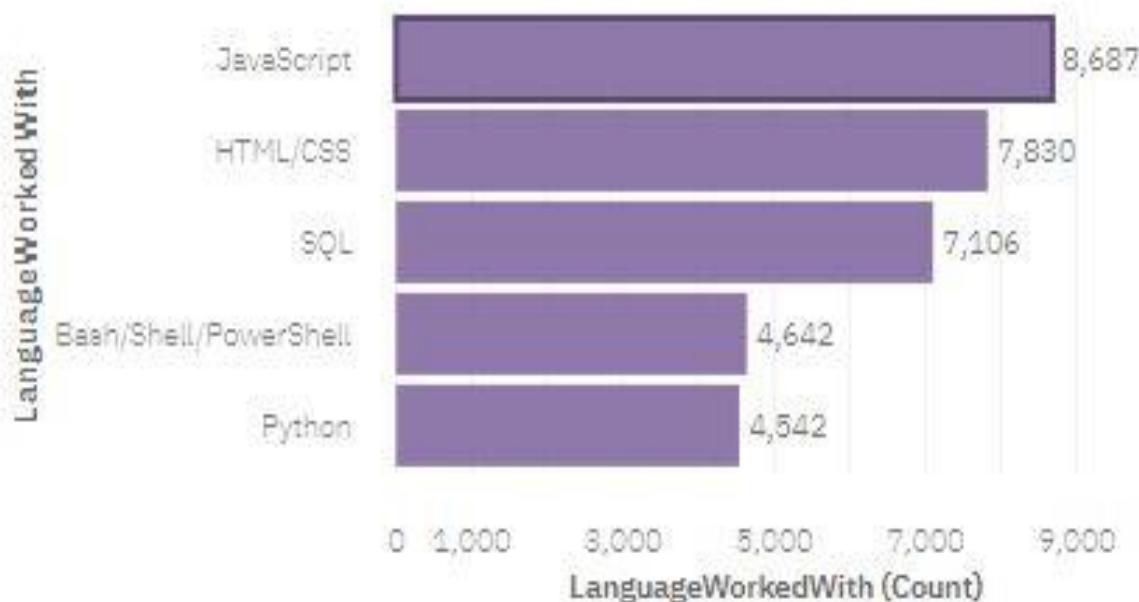
# Results

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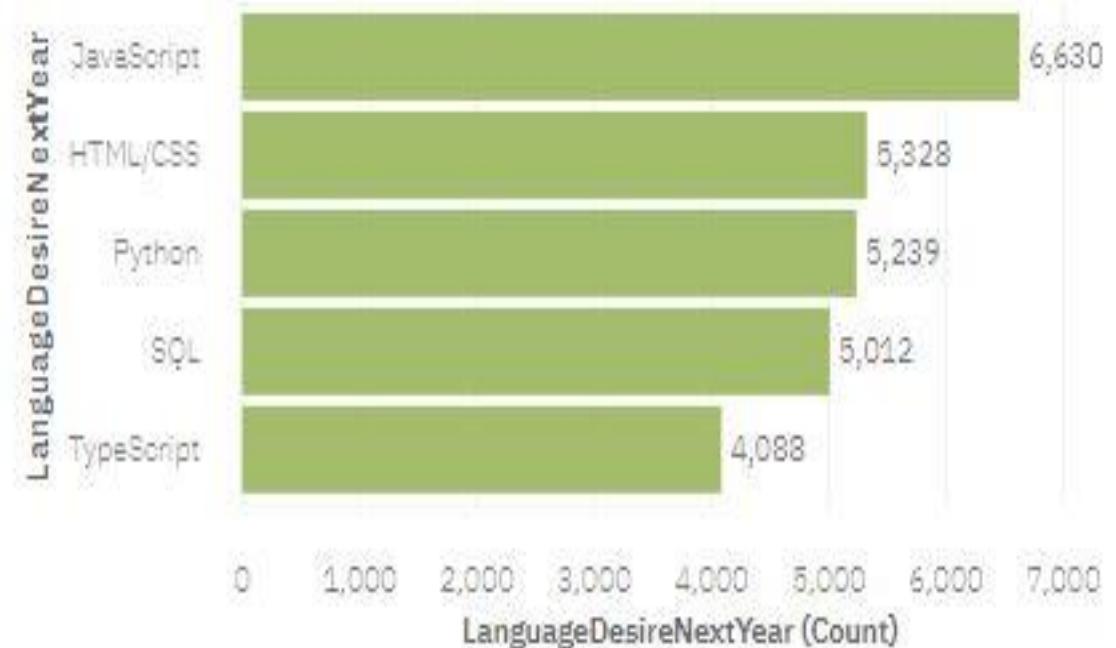
- Descriptive statistics methods were applied to draw insights regarding compensation
- Median age of the respondents figured out to be 29 and it was Male dominant
- Compensation and Age are correlated positively
- Women compensation was higher compared to men.
- Median compensation figured out to be \$52,704 USD per year.

# Programming Language Trends

- Current Year



- Next Year



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## ❑ Findings

- JavaScript is top trending language and has hold the position for both years.
- Python and Typescript is gaining popularity
- HTML/CSS and SQL ,both old nods, are running pretty good.

## ❑ Implications

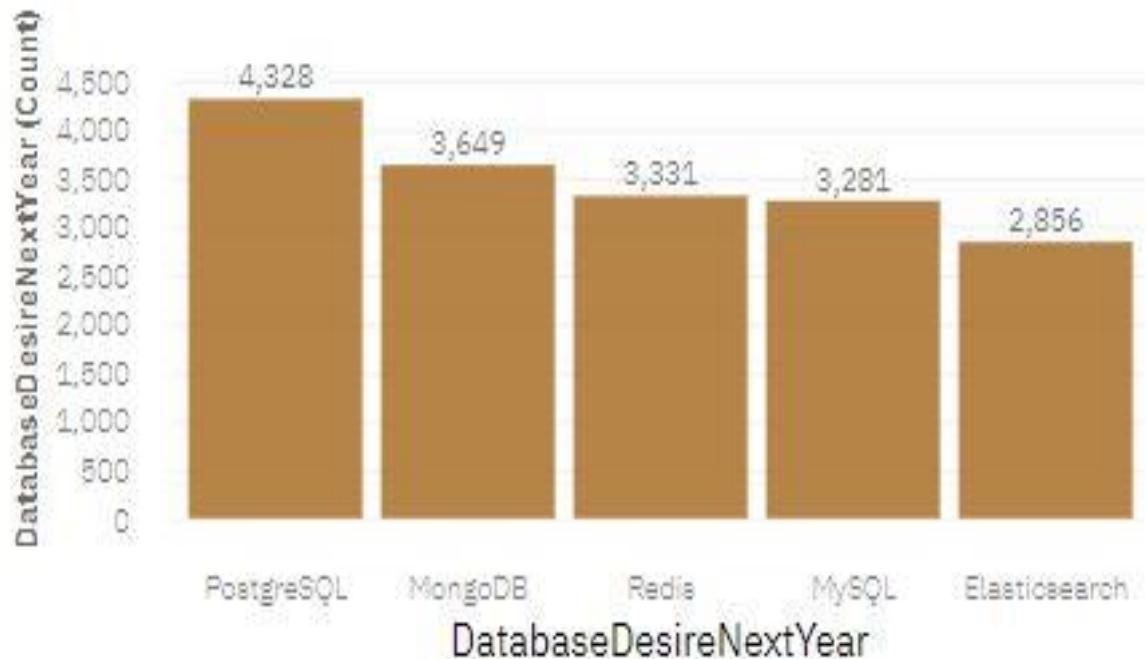
- Programmers needs to have sound knowledge of HTML and SQL as they are running long race.
- Learning JavaScript and Python would help make a great career as developer.

# DATABASE Trends

- Current Year



- Next Year



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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- **Findings**

- PostgreSQL and MongoDB are getting more popular
- MySQL is holding the position tight
- Radia and Elasticsearch are getting recognised.

- **Implications**

- MongoDB is good option in NoSQL DBs
- Learning Radia and Elasticsearch would be helpful

- This shows Aspiring Data Analyst should be compliant with NoSQL database along with SQL ones



# DASHBOARD

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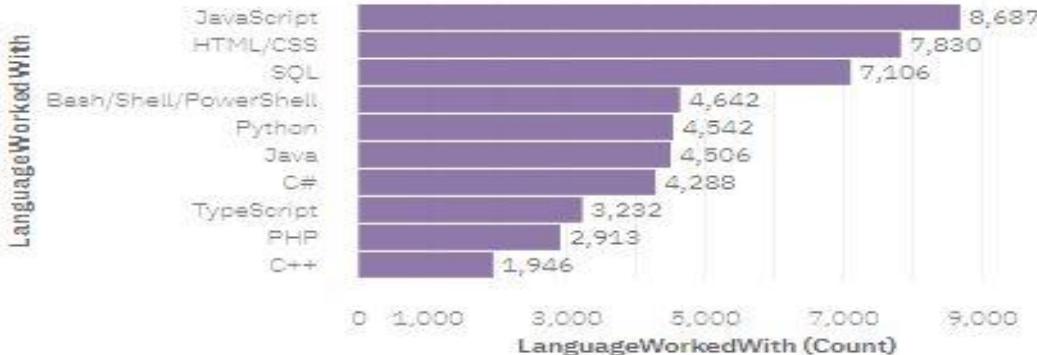


- The permanent link of the read-only view of the Cognos dashboard

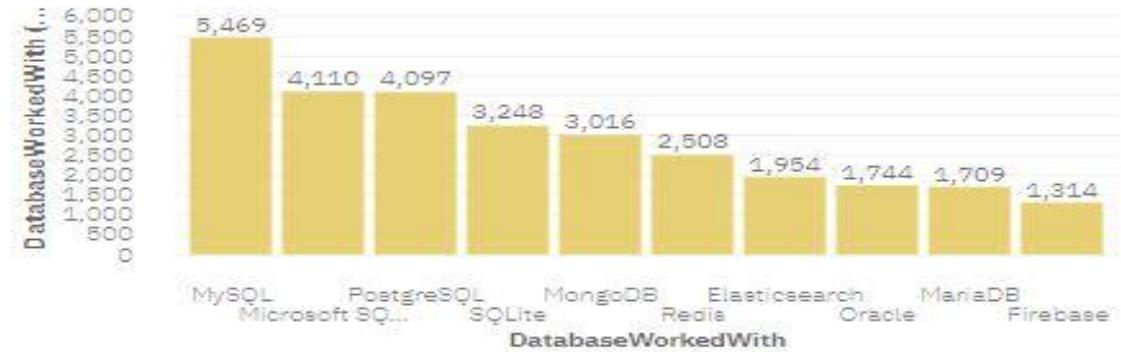
**<https://dataplatform.cloud.ibm.com/dashboards/deb6ee45-196a-4fa7-8c7e-4e31b1c08ae0/view/5904ab0d66b968d040c1cce407992a5574302d0fe1bbd602808c7b490c627397f0611a99c87a4a588b120567f6e846509f>**

# Current Technology Usage

**Top 10 LanguageWorkedWith**



**Top 10 Database Worked With**

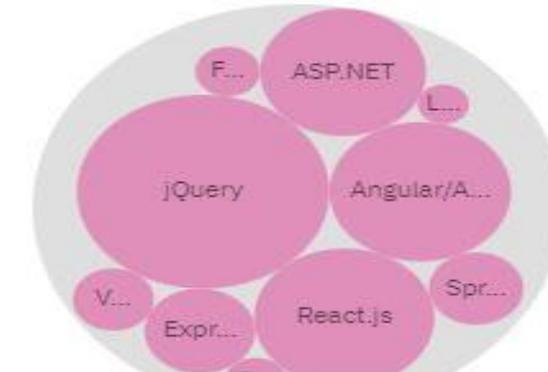


**Platform Worked With**

Arduino  
iOS Windows AWS  
IBM Cloud or Watson  
Google Cloud Platform  
Microsoft Azure  
Raspberry Pi  
Linux  
Docker  
Wordpress  
Macos  
Slack

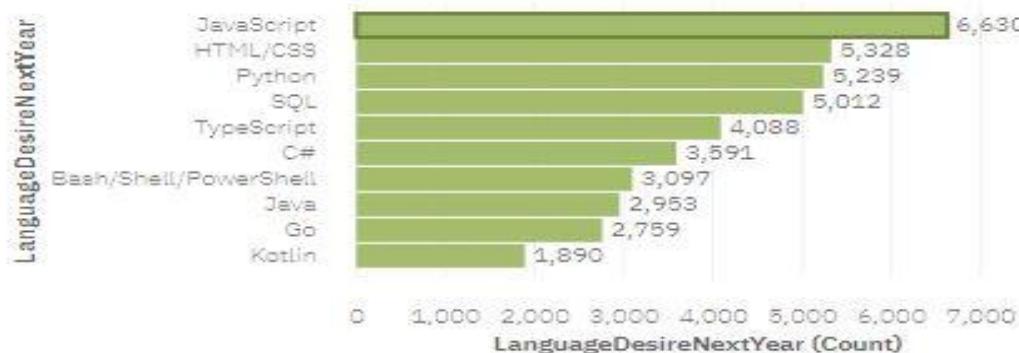
Kubernetes  
Android  
Heroku  
Other(s):  
(no value)

**Top 10 WebFrame Worked With**

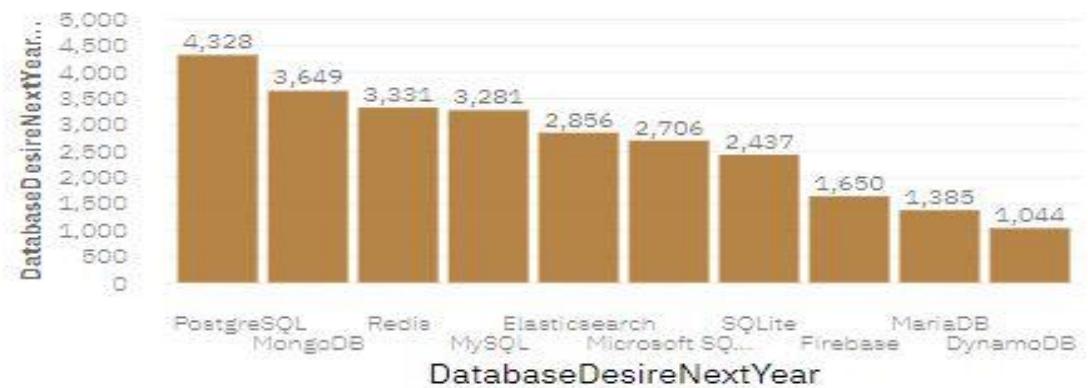


# Future Technology Trend

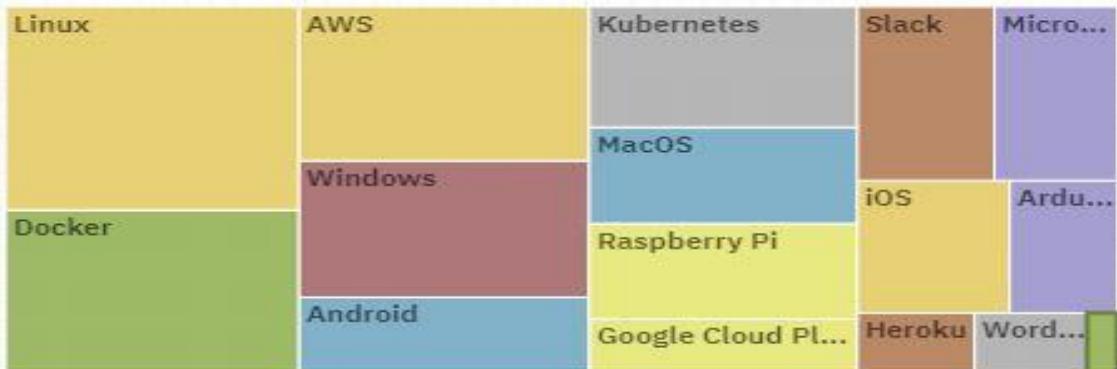
## Top 10 Language Desired Next Year



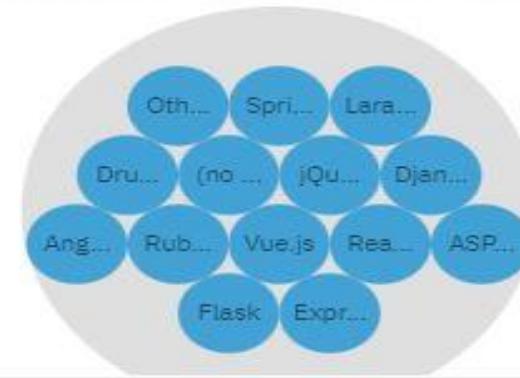
## Top 10 Database Desire Next Year



## Platform Desire Next Year

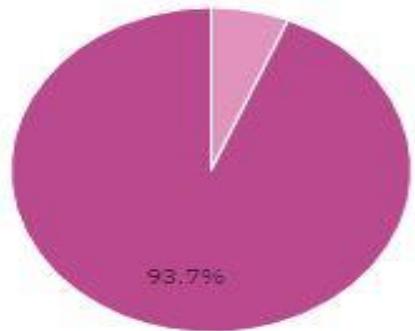


Top 10 WebFrame Desire Next Year

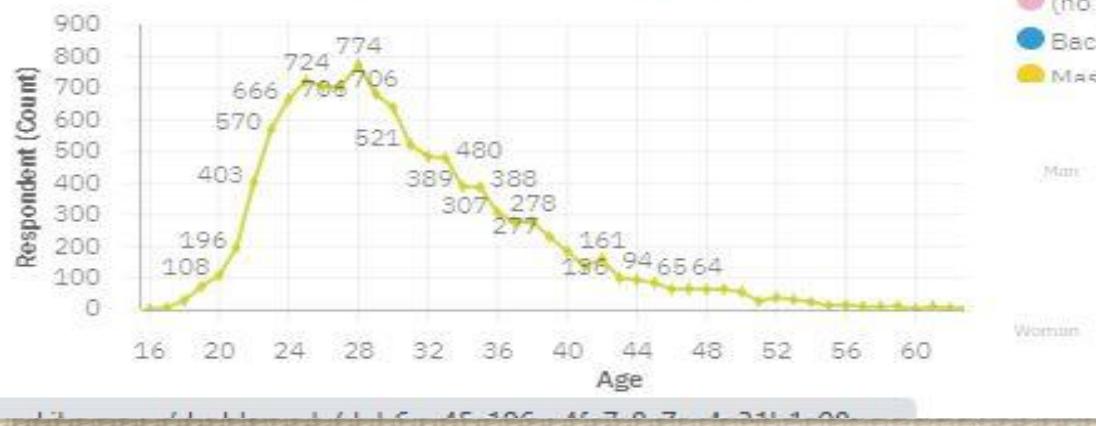


# DEMOGRAPHICS

Gender  
Woman Man



Respondent Count by Age



Respondent (Cou...)

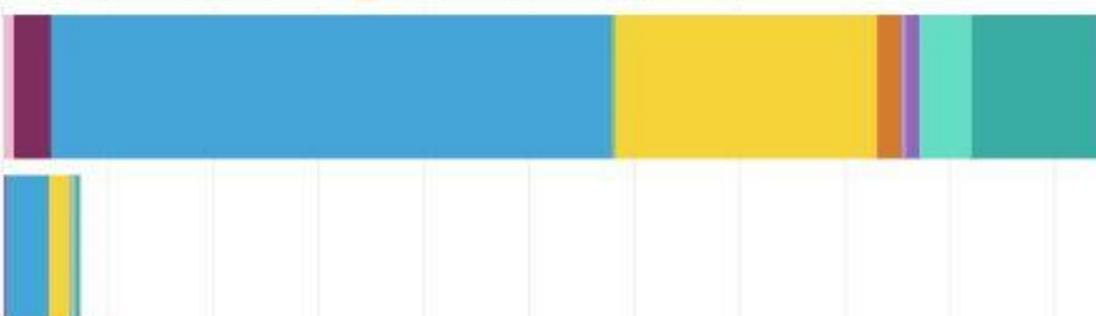


Respondent Count by Gender,classified by EdLevel

EdLevel  
• (no value)  
• Bachelor's degree (BA, BS, B.E...  
• Master's degree (MA, MS, M.F...  
• Associate degree  
• I never completed any formal...  
• Other Doctoral degree /Ph.D/F

Man

Woman



# DISCUSSION

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- Changing Technology Trends over the years
- Which technologies should developers and Data professionals should be learning
- How does the annual compensation for developers look like
- Discuss about gender representation gap



# Overall Findings and Implications

## Findings

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- JavaScript being most popular, HTML/CSS in high use, TypeScript interest is increasing
- There seems to be severe gender and Age discrimination despite women compensation being high.
- Technology divides among countries, USA tops the respondent count followed by Canada, India, France.
- NoSQL databases gaining interest.
- AWS and Docker are changing the traditional platform.

## Implications

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- Developers and programmers need to keep pace with rapidly changing technology trends.
- The gender gap should get minimalised over the years.
- More countries should work on building tech savvy nation
- With growing demand to handle big data, perform AI & ML, data professionals should enhance SQL as well as NoSQL databases.

# Conclusion

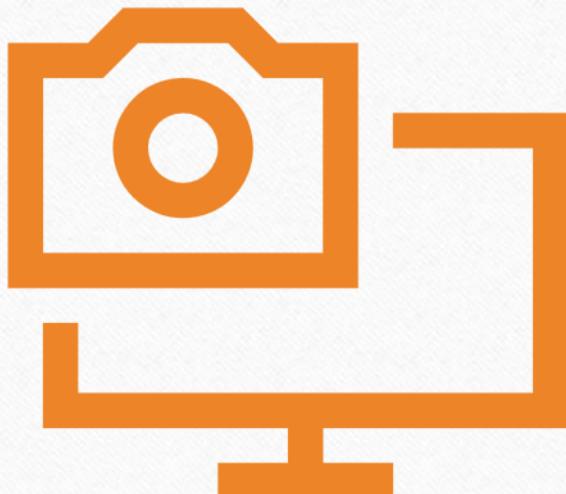
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- The Survey has gathered many insights for developers and data professionals
- Developers and Programmers need to upskill themselves with changing technology demands.
- Building strong hold on current and next year technology trends surely benefit tech people and computer science students.
- Age and Gender discrimination in tech area should get minimalised
- Countries needs to work more on building technology driven approach and also focus on Formal education of their netizens.

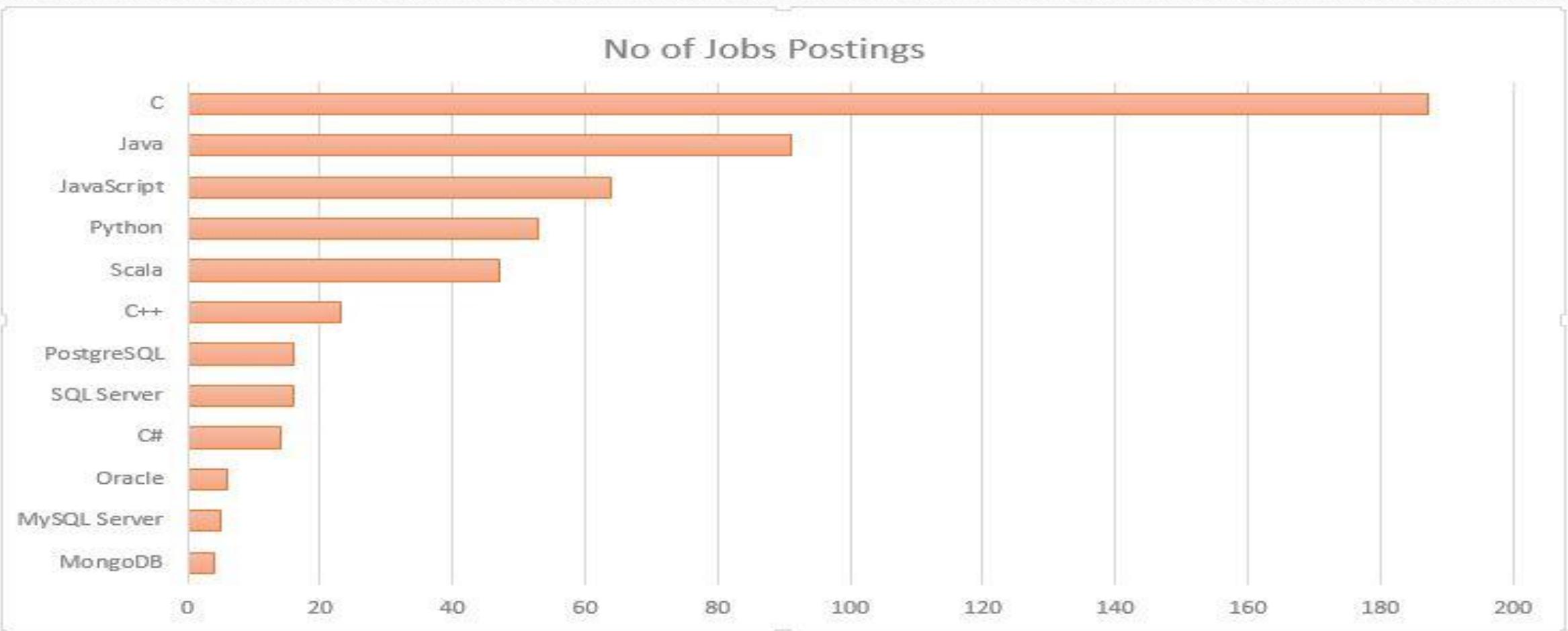
# APPENDIX

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- Included bar graph showing number of Job Postings for various technology in the next slide.
- Included bar graph showing Average Annual Compensation for various technologies in demand



# GitHub Job Posting



# Popular Languages

Average Annual Salary

