Technology Trends & Analysis Presentation

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IBM Developer

SKILLS NETWORK

OUTLINE

- Executive Summary
- Introduction
- Methodology
- Results
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  - Dashboard
- Discussion
  - Findings & Implications
- Conclusion
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EXECUTIVE SUMMARY

- Trends in programming languages and databases
- Demographics survey
- Technological gap in countries
- Gender gap in jobs

INTRODUCTION

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

- **Data Collection Sources**
  - Stack Overflow Developer 2019 Survey
  - GitHub Job Postings
  - Programming Languages Annual Salary
- **Data Exploration**
- **Data Cleaning**
- **Data Visualization**
- **Presentation**

RESULTS

	Respondent...	LanguageWorkedWith	LanguageDesireNextYear	DatabaseWorkedWith	DatabaseDesireNextYear
1.	25142	R			
2.	25142	Python			
3.	25142	C	C		
4.	25142	Go	Python		
5.	25142	C++	C++		
6.	25142	HTML/CSS	R		
7.	25142	PHP			
8.	25142	Bash/Shell/PowerShell	Bash/Shell/PowerShell	PostgreSQL	PostgreSQL
9.	25141	C#	F#		Microsoft SQL Server
10.	25141	JavaScript			
11.	25141	TypeScript			
12.	25141	HTML/CSS			Redis
13.	25141	Java			
14.	25141	Python			
15.	25141	SQL			

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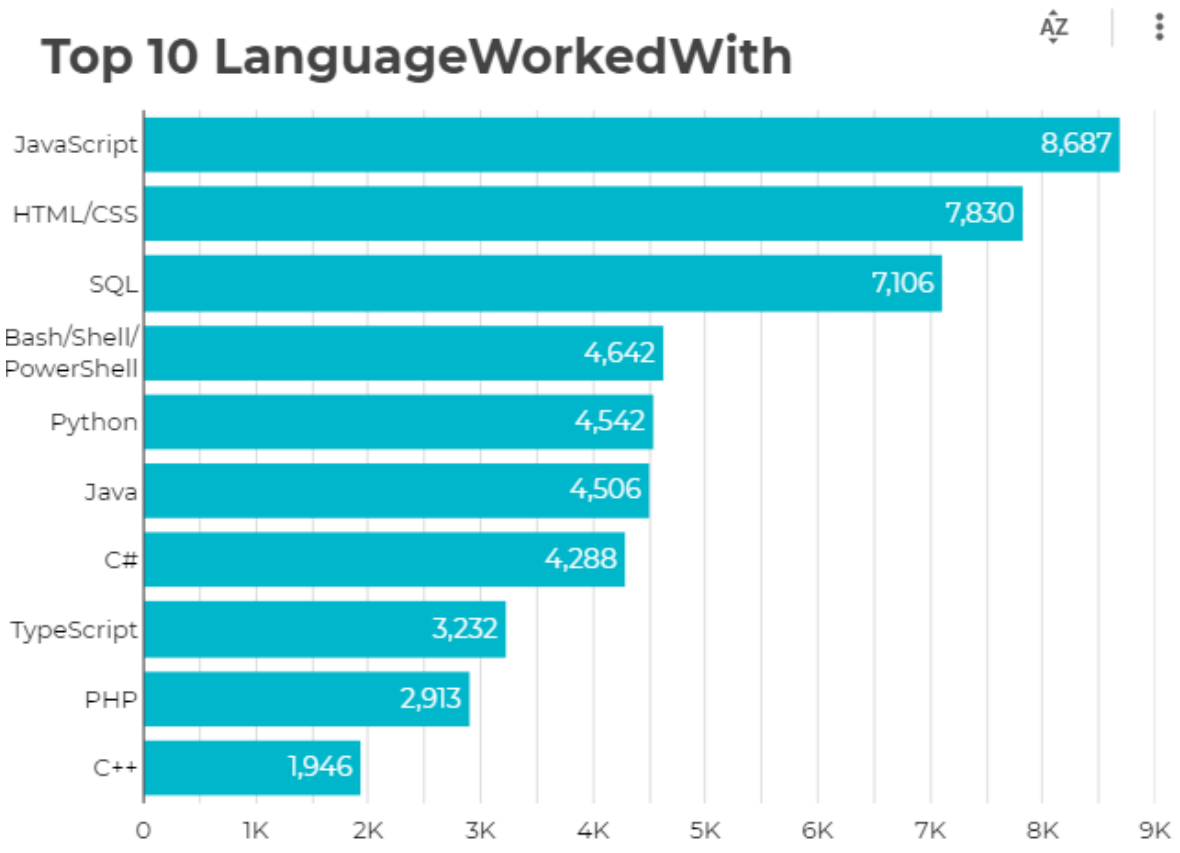
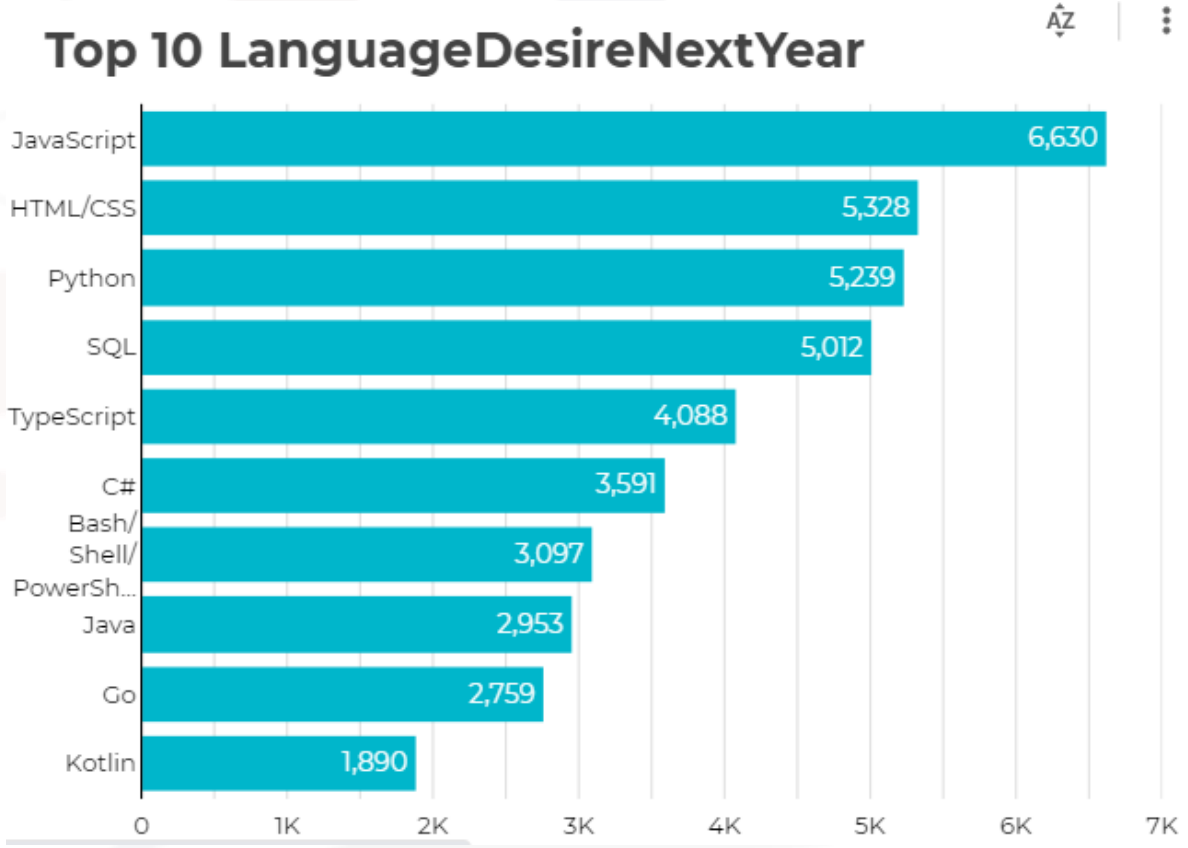
PROGRAMMING LANGUAGE TRENDS





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SKILLS NETWORK

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

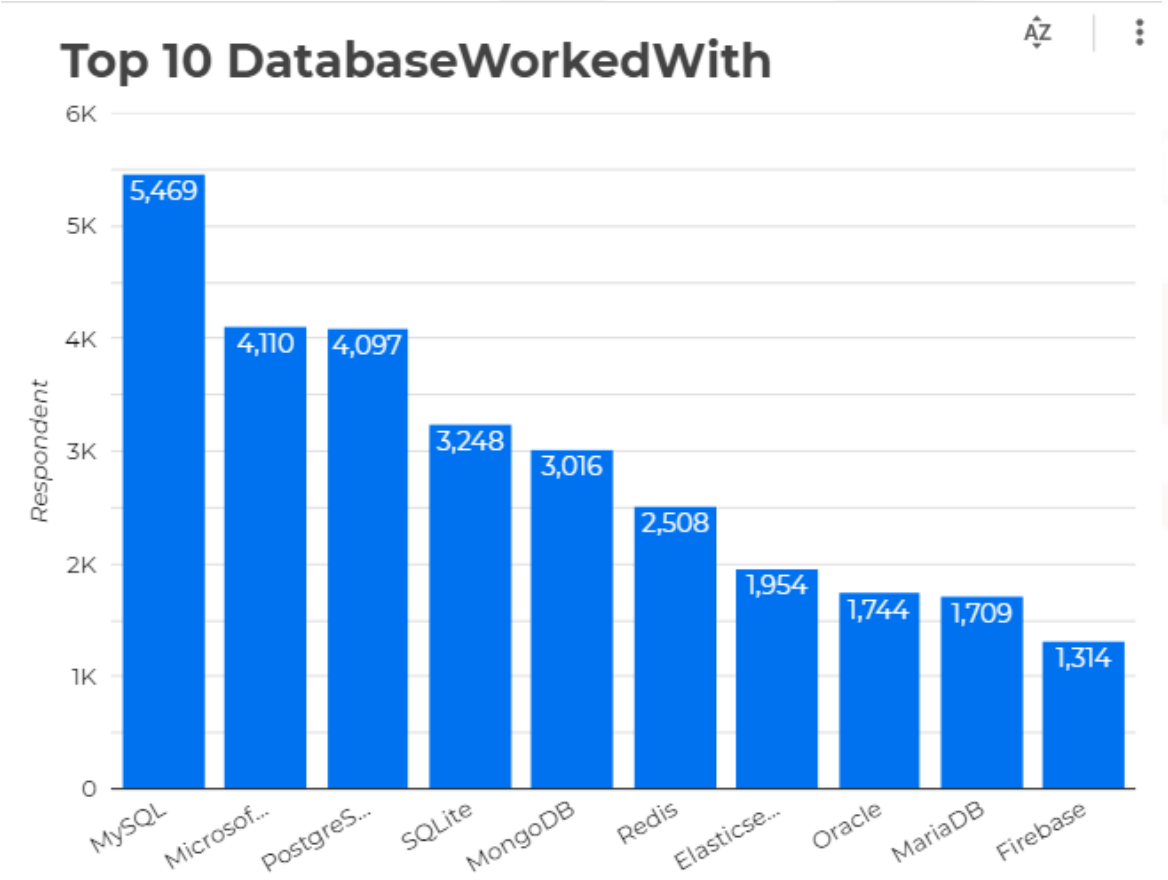
Findings

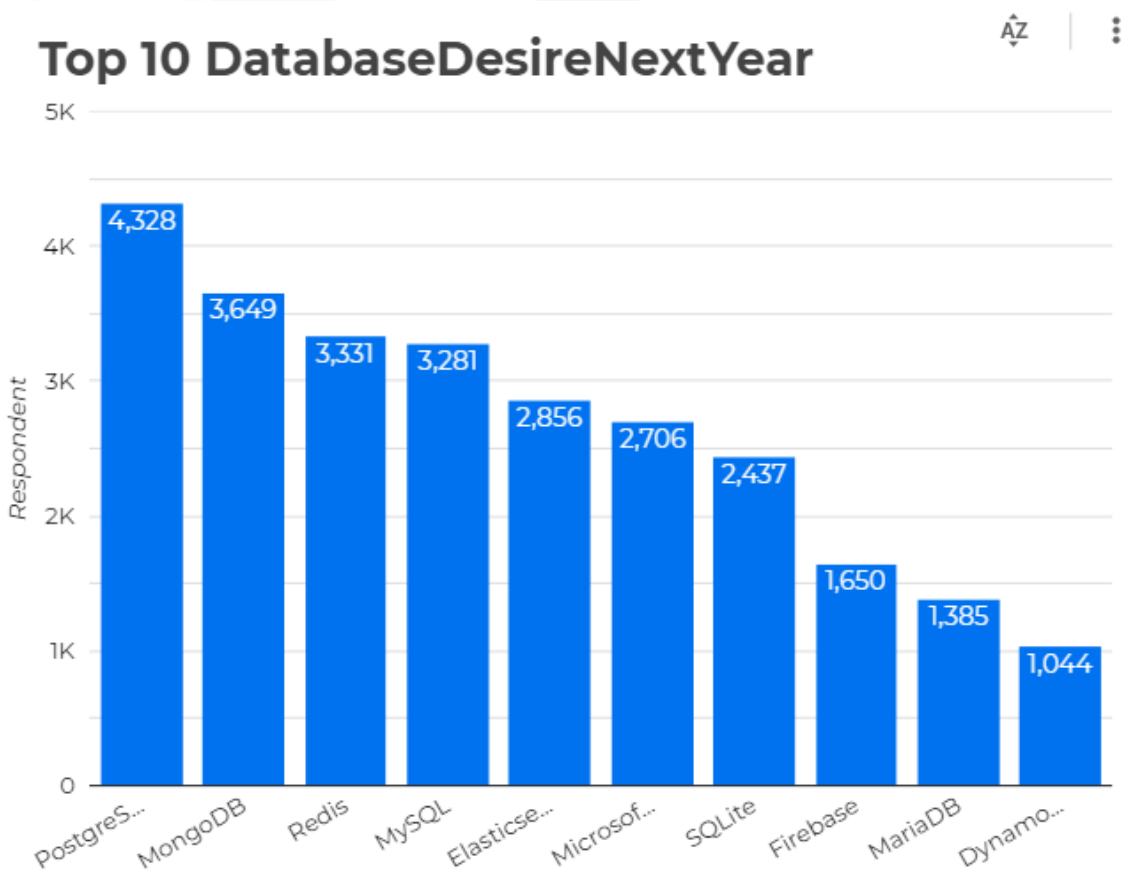
- JavaScript, HTML/CSS, SQL are top 3 this year
- Python and Typescript becoming popular next year
- PowerShell edged out in next year

Implications

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

DATABASE TRENDS





DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL most popular
- Behind is Microsoft SQL
- MongoDB and Redis are upcoming favorites
- New kid on the block: Elasticsearch

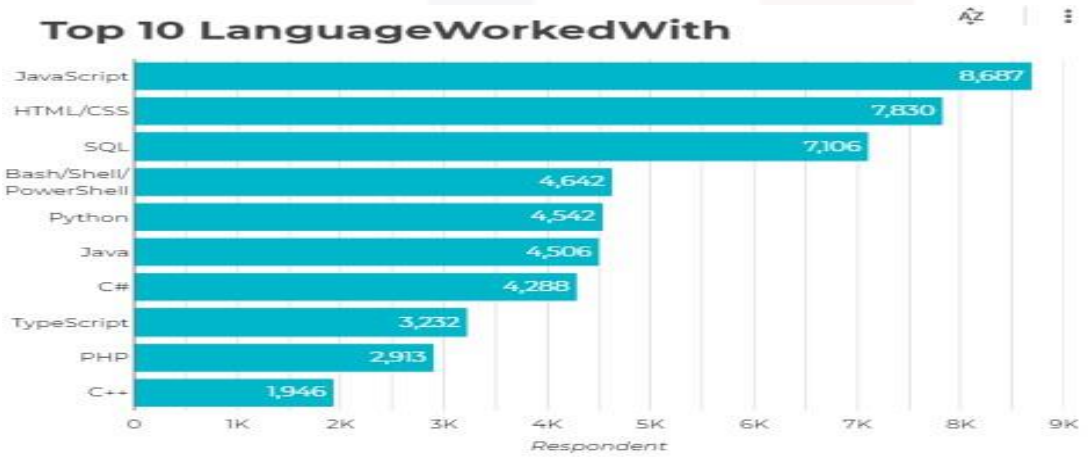
Implications

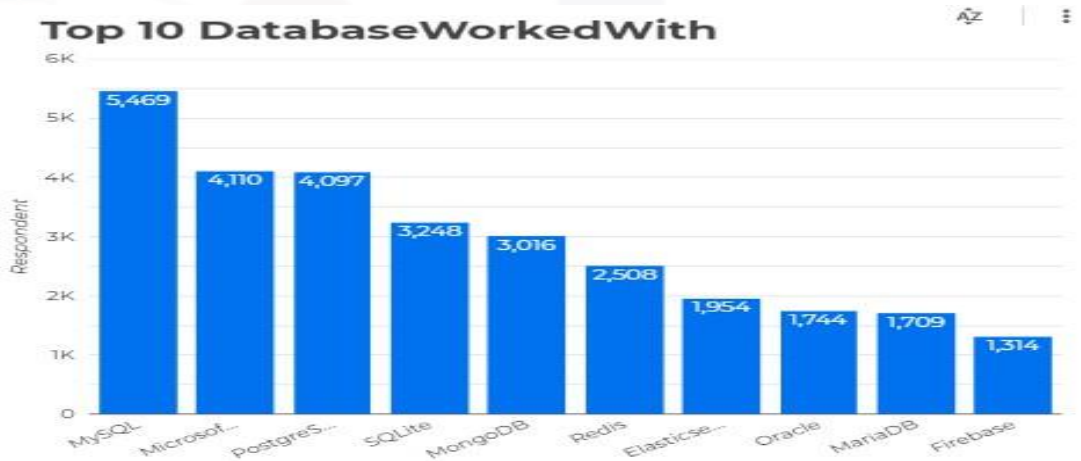
- Open source databases are still preferable in companies
- NoSQL databases will make an impact for storing non relational data
- Redis supports abstract data types
- Pre tuned search to website, app, or ecommerce store

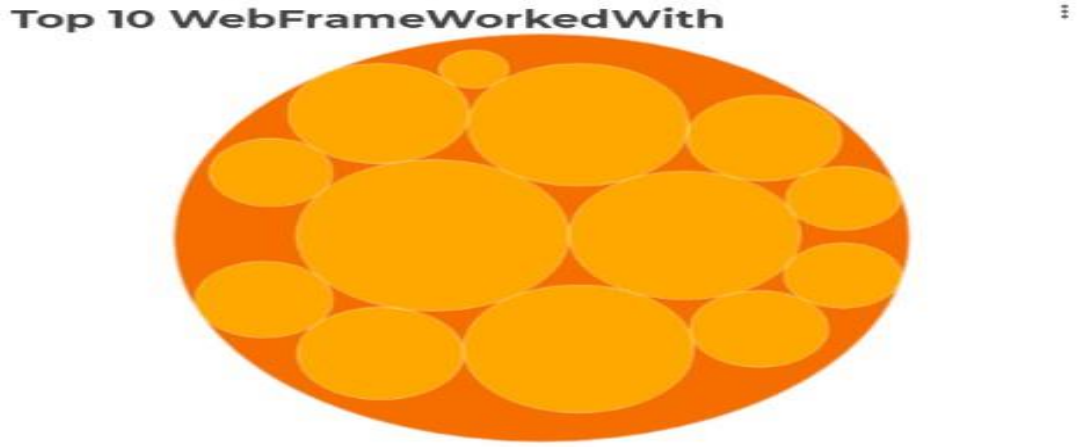
DASHBOARD

https://datastudio.google.com/reporting/a55d5713-edcb-4e2a-8a62-c17553a7ea05

DASHBOARD TAB 1







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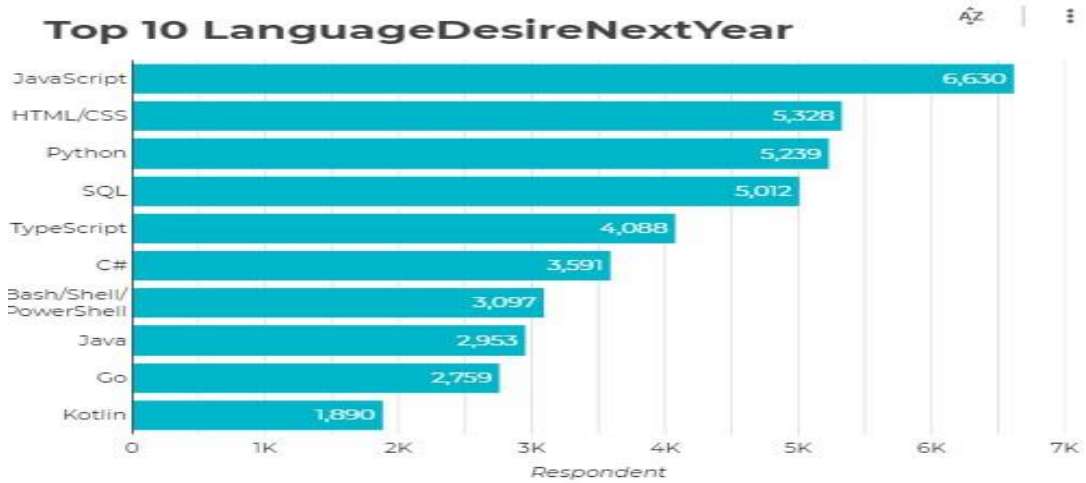

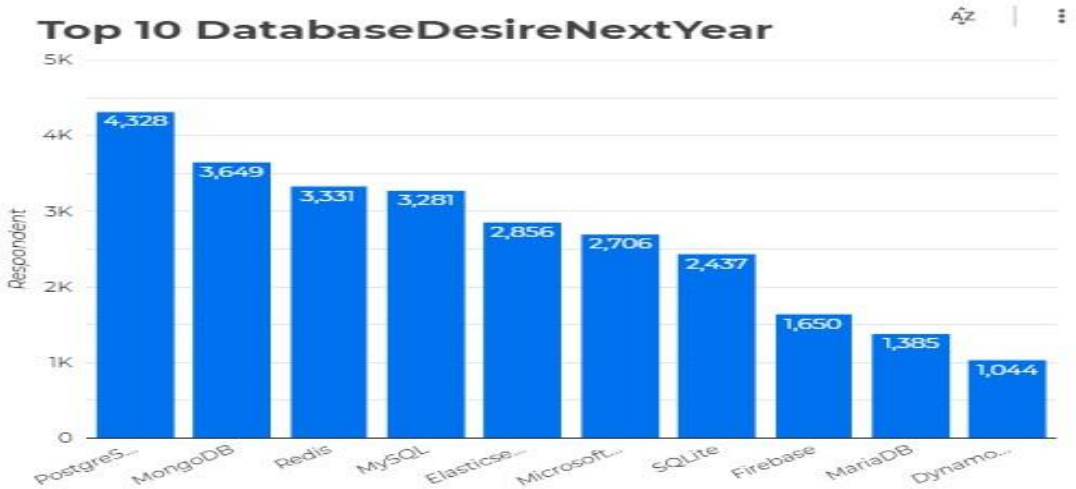

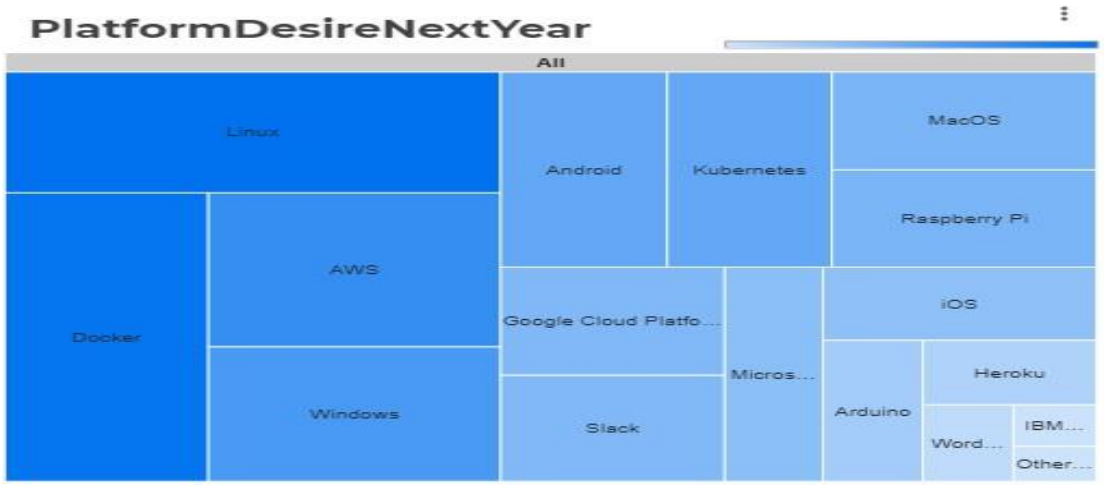

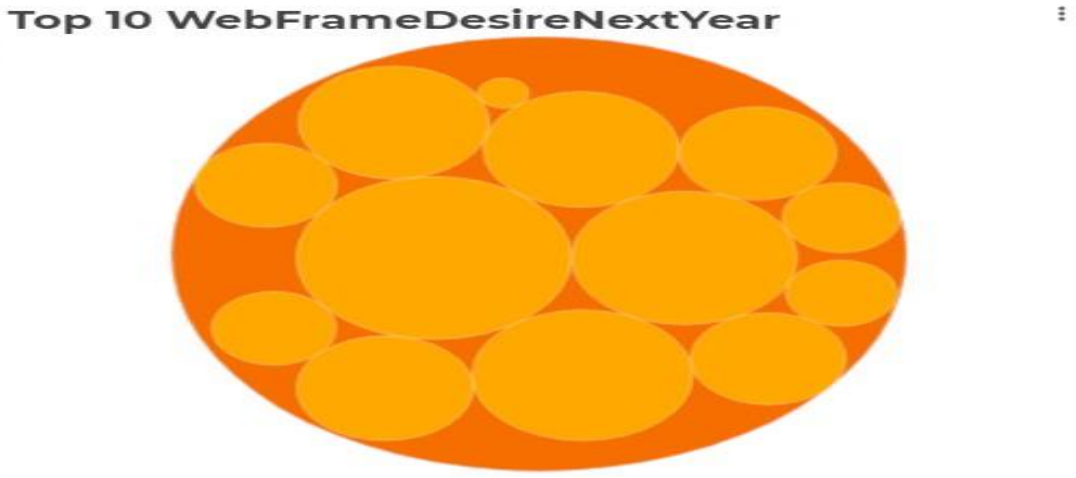

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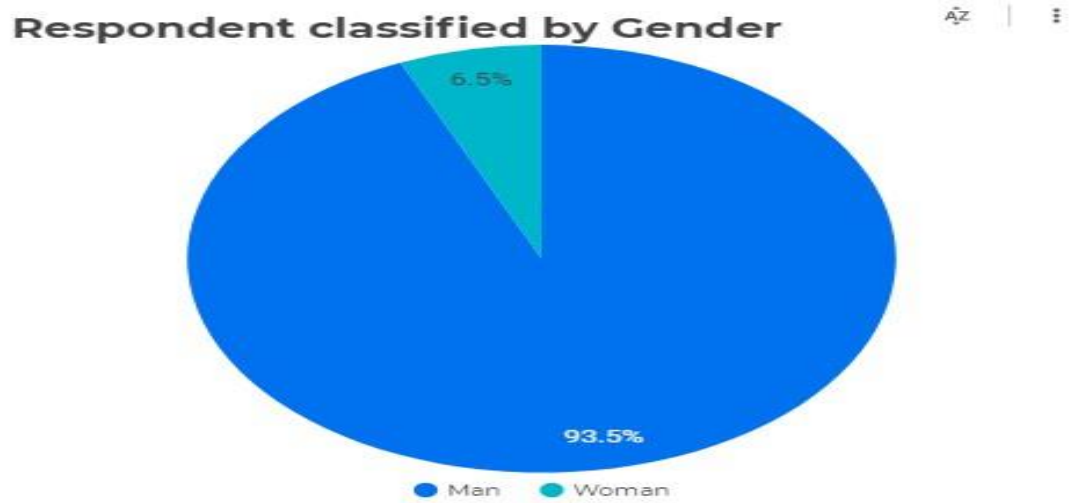
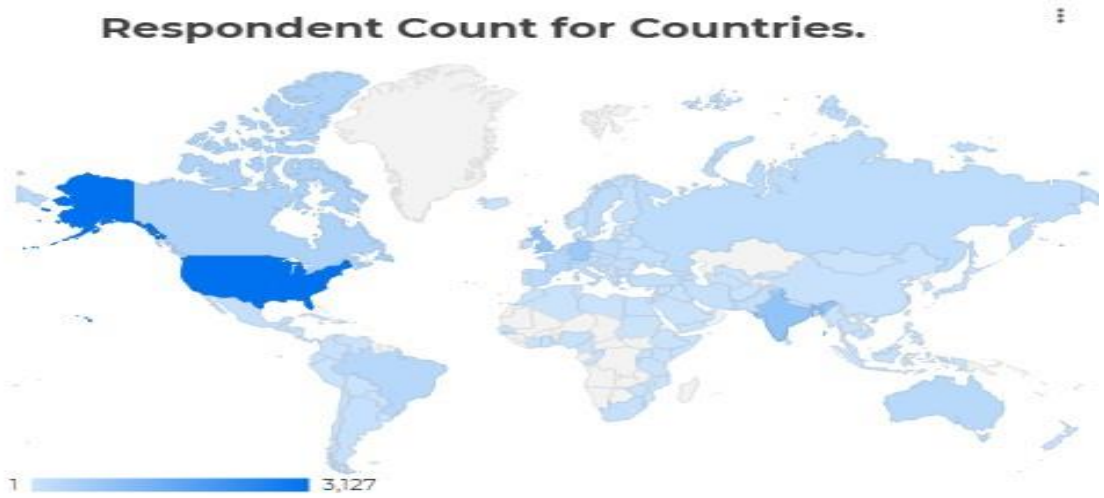
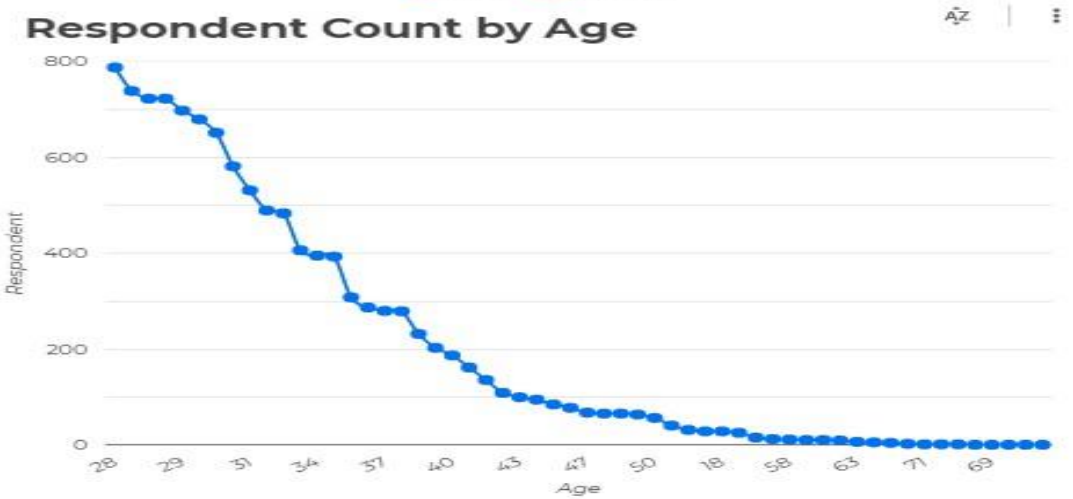
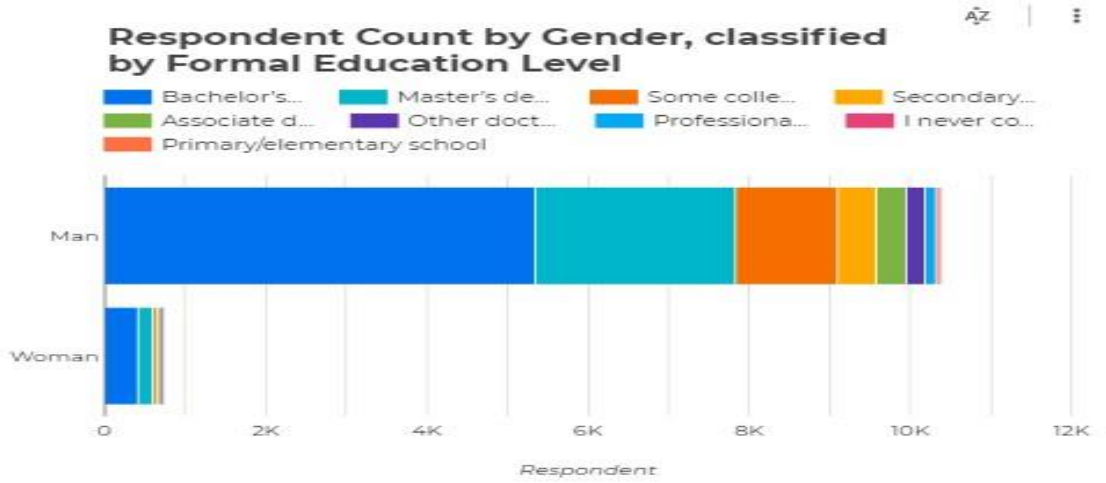








DISCUSSION

- Technology Trends now and future
- Training and Reskilling workers
- Females participation in Technology field
- Bridge divide of technology gaps in developing countries
- Eliminate age and education discrimination in employment

OVERALL FINDINGS & IMPLICATIONS

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

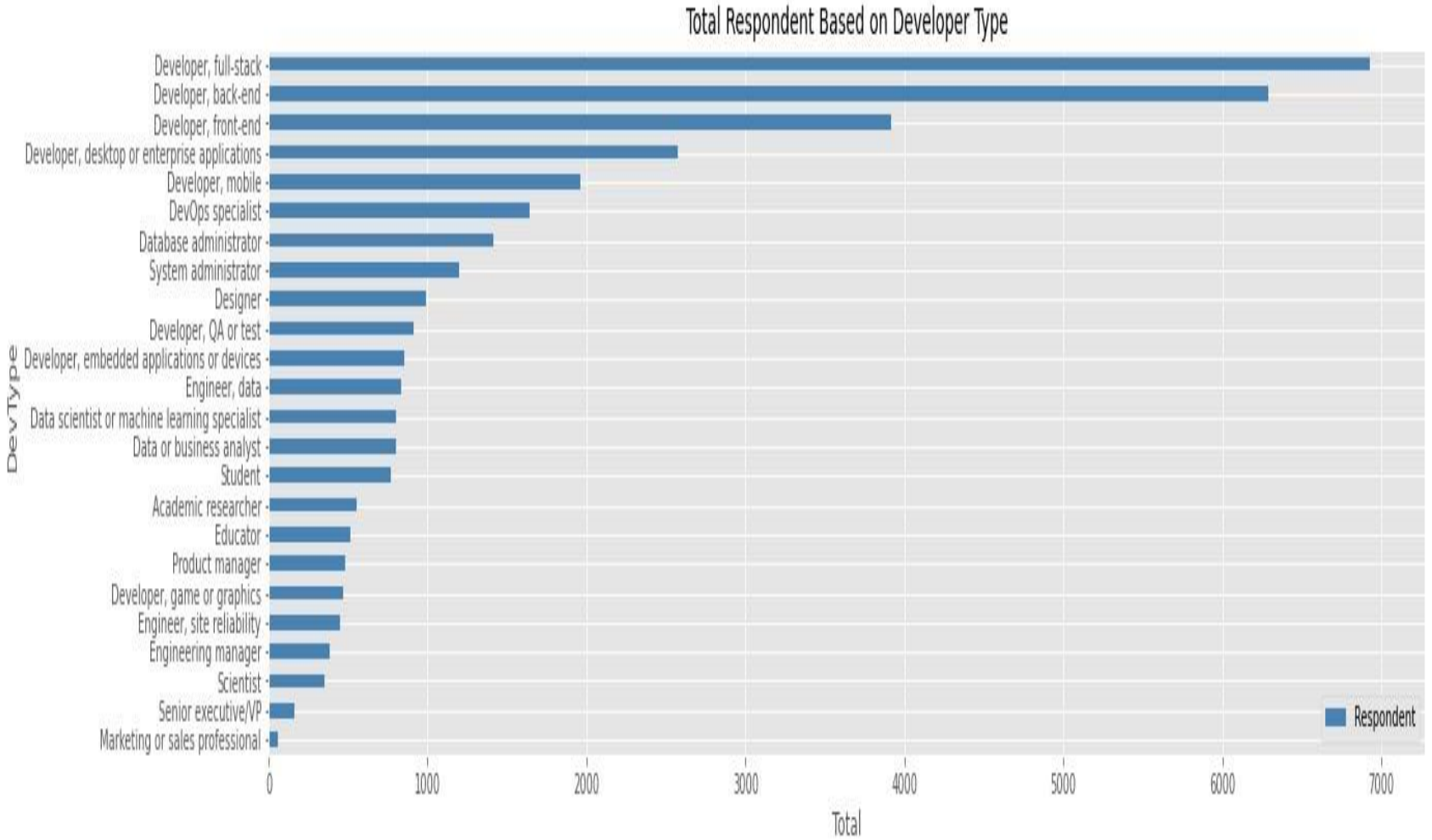
Implications

- Companies need to be flexible and adjust to rapid changes
- Need to spread technology out to lagging countries
- Impact of job hiring’s
- Shift to faster app deployments and cloud services in future

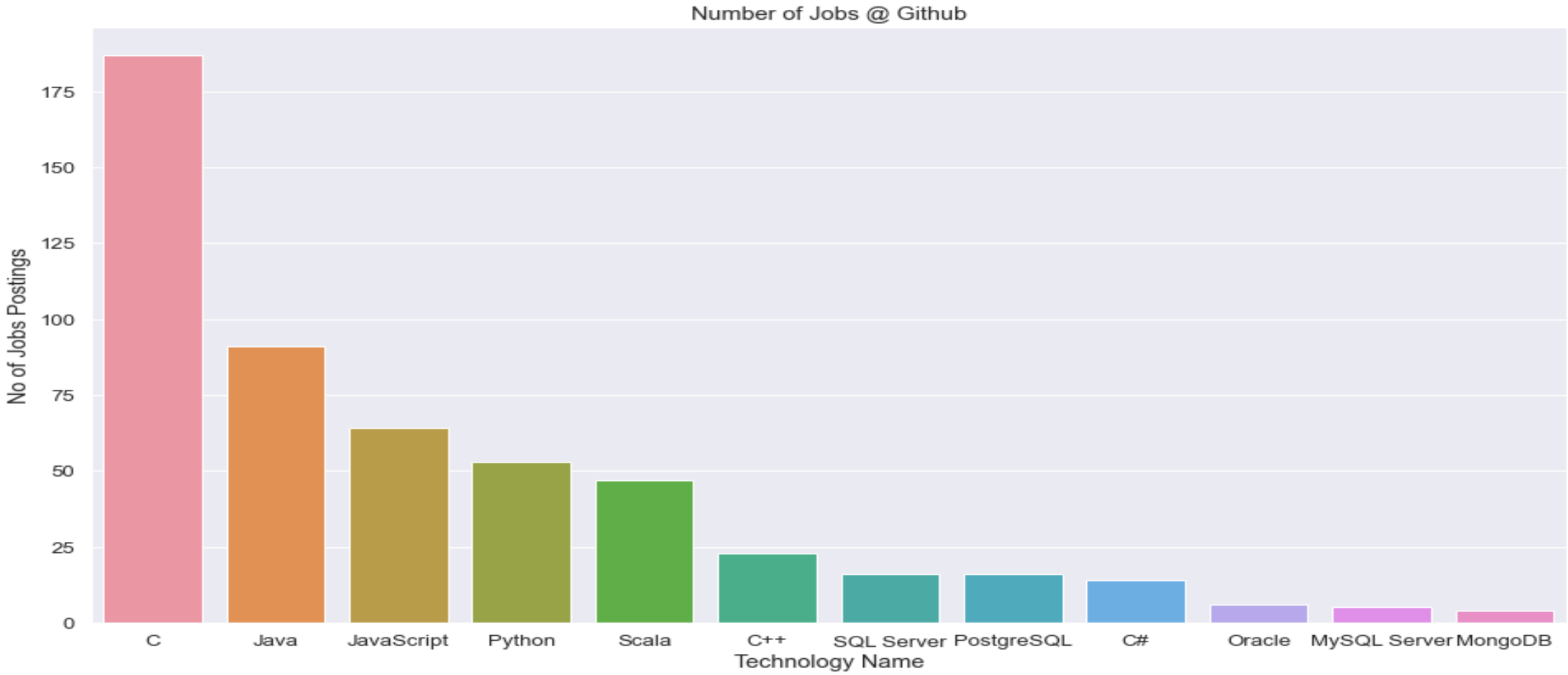
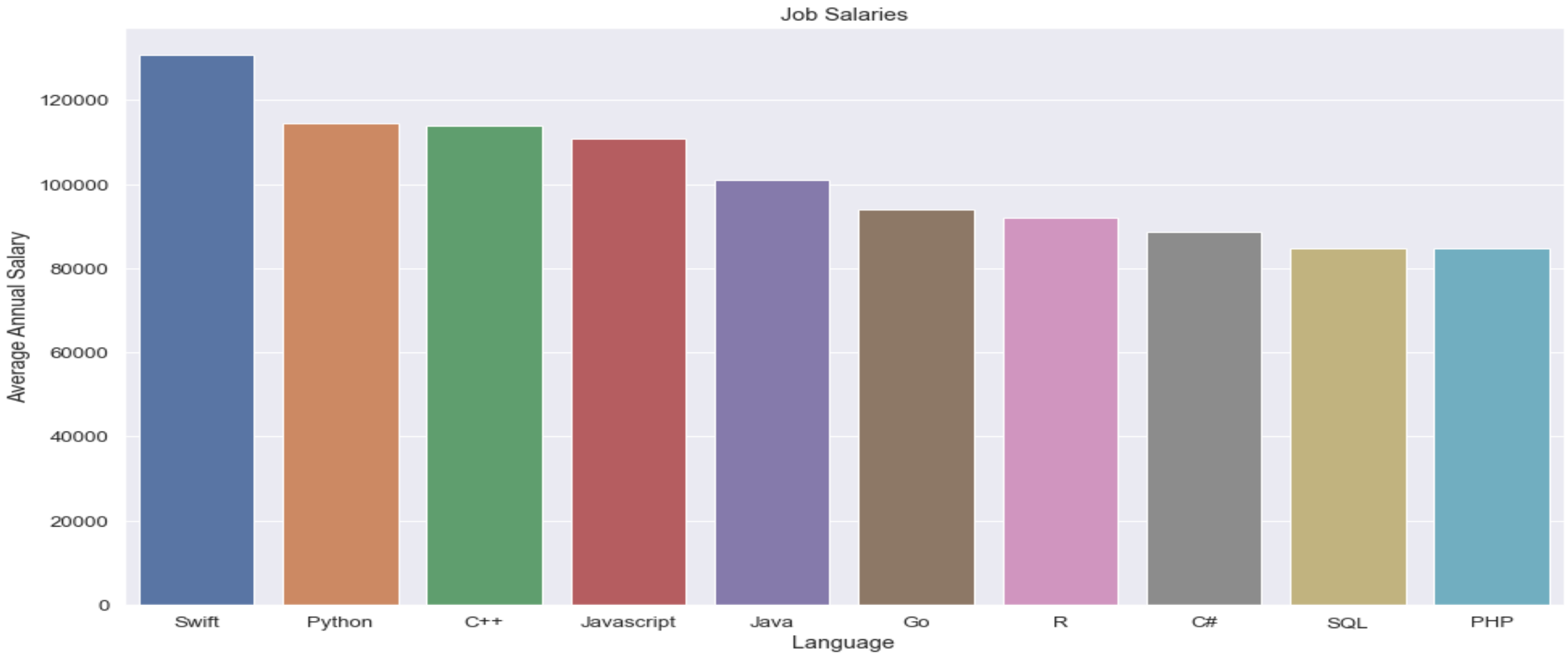
CONCLUSION

- 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


Total Respondent Based on Developer Type
Developer, full-stack
Developer, back-end
Developer, front-end
Developer, desktop or enterprise applications
Developer, mobile
DevOps specialist
Database administrator
System administrator
Designer
Developer, QA or test
Developer, embedded applications or devices
Engineer, data
Data scientist or machine learning specialist
Data or business analyst
Student
Academic researcher
Educator
Product manager
Developer, game or graphics
Engineer, site reliability
Engineering manager
Scientist
Senior executive/VP
Marketing or sales professional
DevType
Respondent
0
1000
2000
3000
4000
5000
6000
7000
Total

GITHUB JOB POSTINGS



POPULAR LANGUAGES