



Technology Trends

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OUTLINE



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EXECUTIVE SUMMARY



- Trends and forecast in programming languages and databases
- Differences among countries
- Gender gap in jobs

INTRODUCTION



- Analyzing trends in software development
- Identify future skill requirements
- Top programming languages in use
- Top database skills in use
- Audience: HR departments and IT Recruiters

METHODOLOGY



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

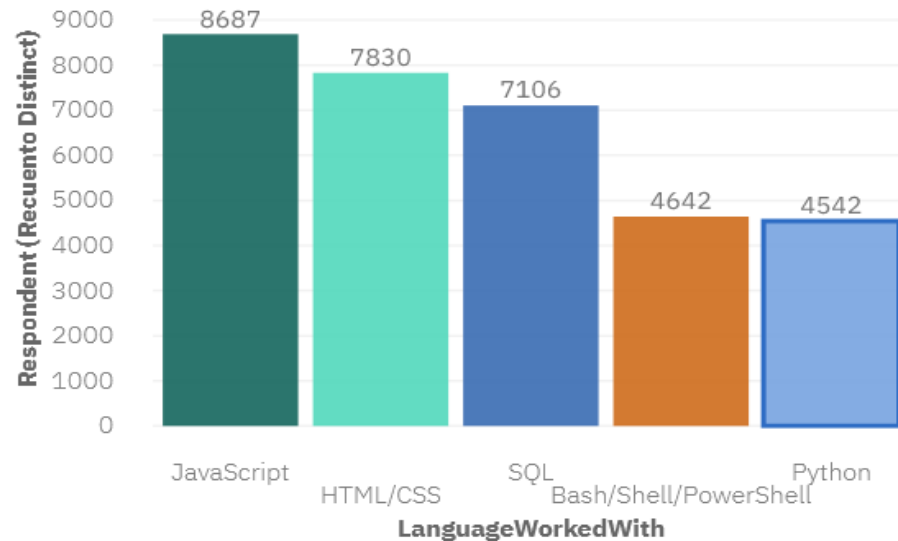
RESULTS

Respondent	MainBranch	Hobbyist	OpenSourcer	OpenSource	Employment	Country	Student	EdLevel	UndergradMajor	...	WelcomeChange
0	4	I am a developer by profession	No	Never	The quality of OSS and closed source software ...	Employed full-time	United States	No	Bachelor's degree (BA, BS, B.Eng., etc.)	Computer science, computer engineering, or sof...	Just as welcome now as I felt last year
1	9	I am a developer by profession	Yes	Once a month or more often	The quality of OSS and closed source software ...	Employed full-time	New Zealand	No	Some college/university study without earning ...	Computer science, computer engineering, or sof...	Just as welcome now as I felt last year
2	13	I am a developer by profession	Yes	Less than once a month but more than once per ...	OSS is, on average, of HIGHER quality than pro...	Employed full-time	United States	No	Master's degree (MA, MS, M.Eng., MBA, etc.)	Computer science, computer engineering, or sof...	Somewhat more welcome now than last year
4	17	I am a developer by profession	Yes	Less than once a month but more than once per ...	The quality of OSS and closed source software ...	Employed full-time	Australia	No	Bachelor's degree (BA, BS, B.Eng., etc.)	Computer science, computer engineering, or sof...	Just as welcome now as I felt last year
5	19	I am a developer by profession	Yes	Never	The quality of OSS and closed source software ...	Employed full-time	Brazil	No	Some college/university study without earning ...	Computer science, computer engineering, or sof...	Just as welcome now as I felt last year

PROGRAMMING LANGUAGE TRENDS

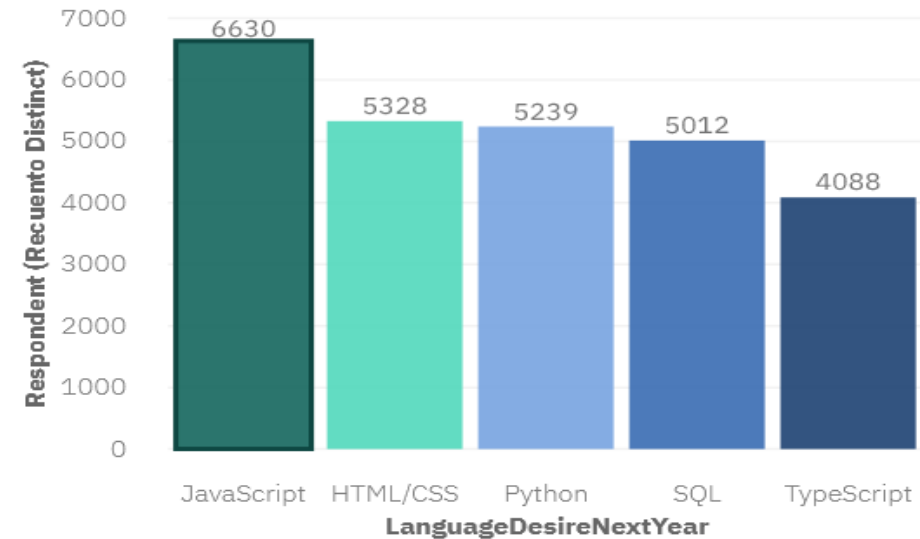
Current Year

Top 5 programming languages



Next Year

Top 5 Desired Programming Languages



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript, HTML/CSS and SQL are the most used programming languages this year
- Python and Typescript will become top 5 next year
- PowerShell less popular than this year

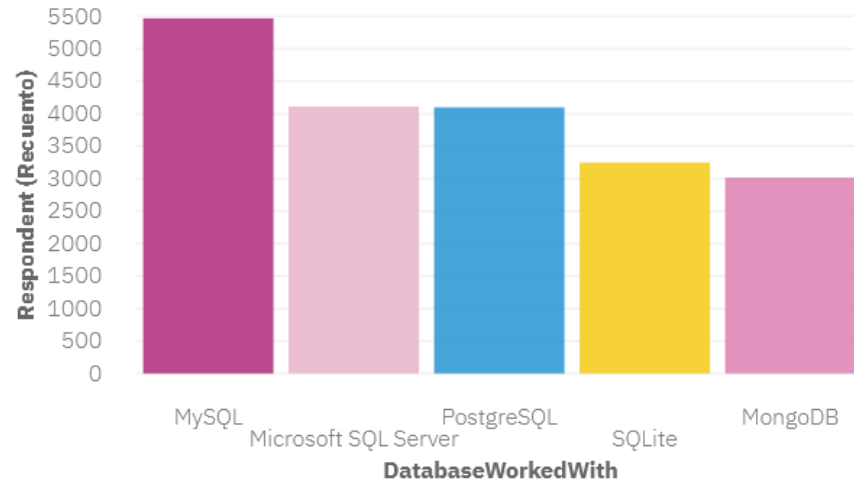
Implications

- Higher demand of web development profiles
- Data Science languages are becoming popular.
- Python is more relevant as it's used in data science and analytics and development

DATABASE TRENDS

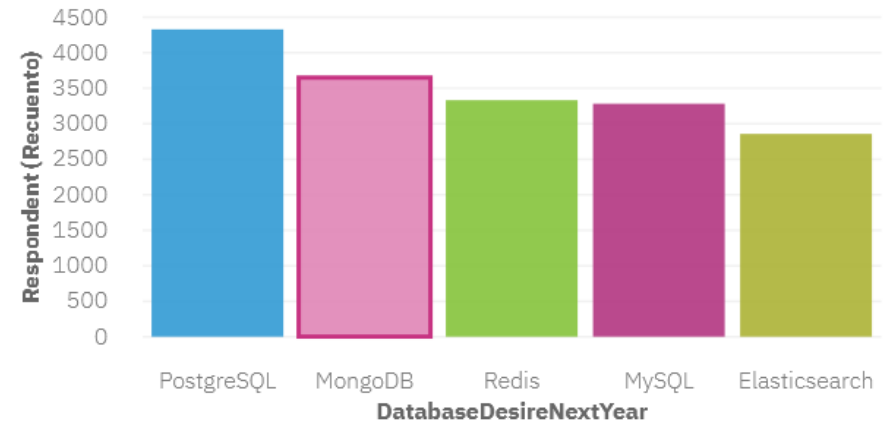
Current Year

Top 5 Databases



Next Year

Top 5 Databases Next Years



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- SQL databases are the majority in the job market.
- No-SQL databases will be relevant as MongoDB and Redis are increasing their popularity.
- MYSQL and Microsoft SQL Server are the most popular ones this year

Implications

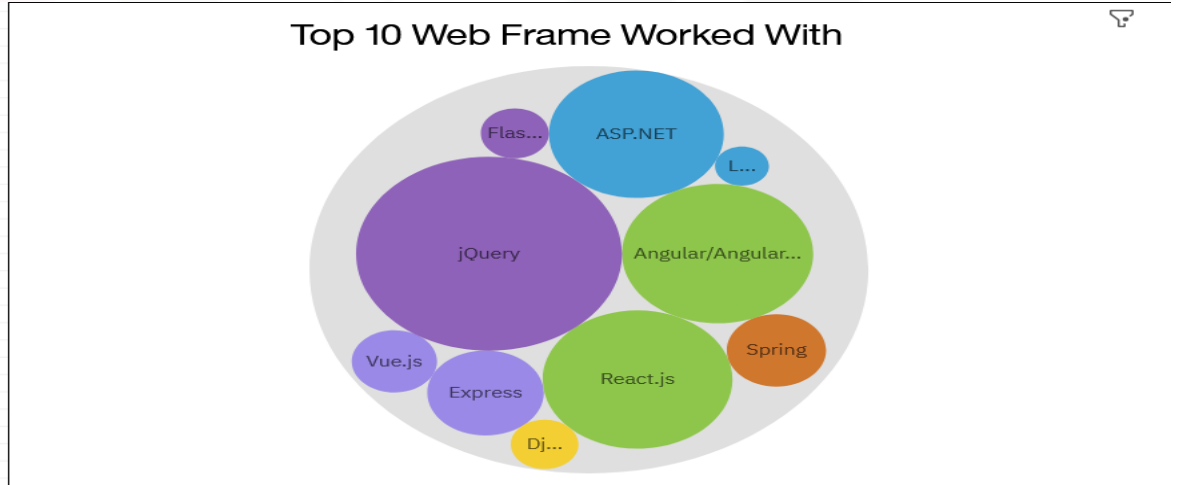
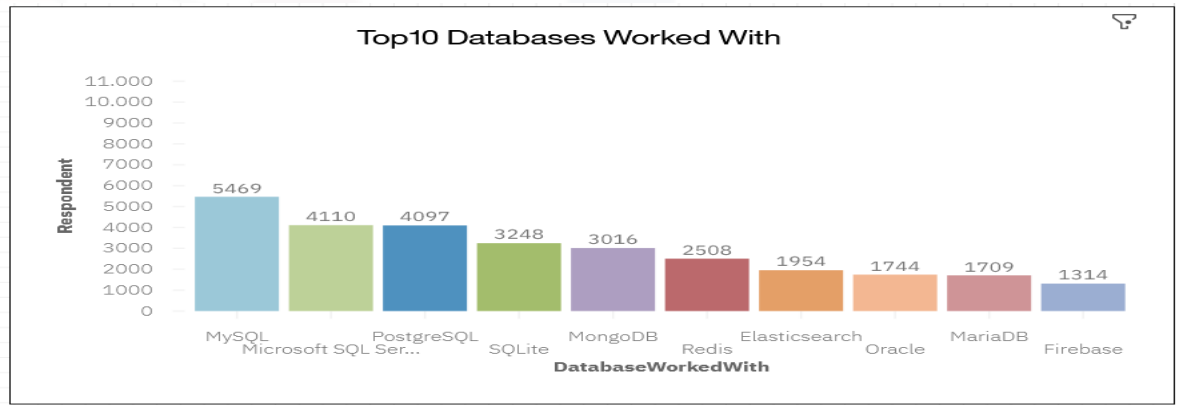
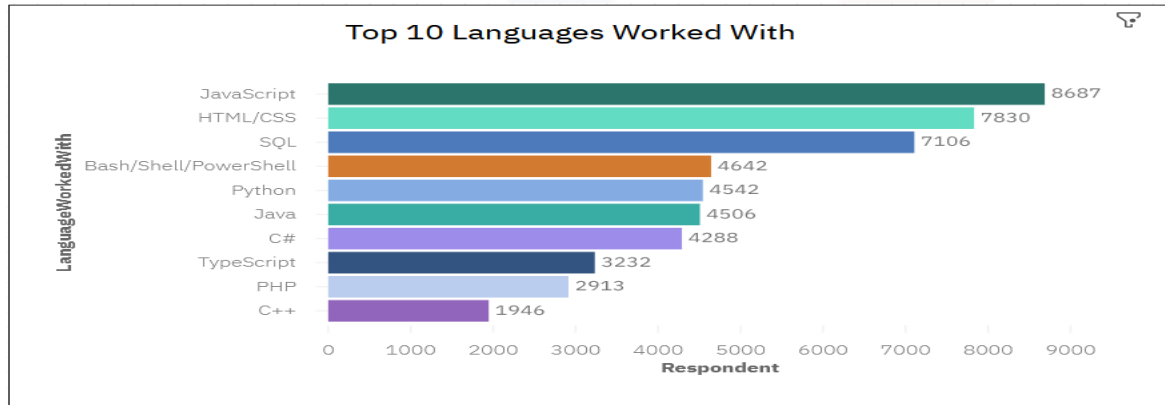
- Given the huge amount of data available, knowledge of databases languages will be key to find a job
- Concretely, use of No-SQL databases will be higher than SQL databases
- Open-source databases mostly used in companies

DASHBOARD



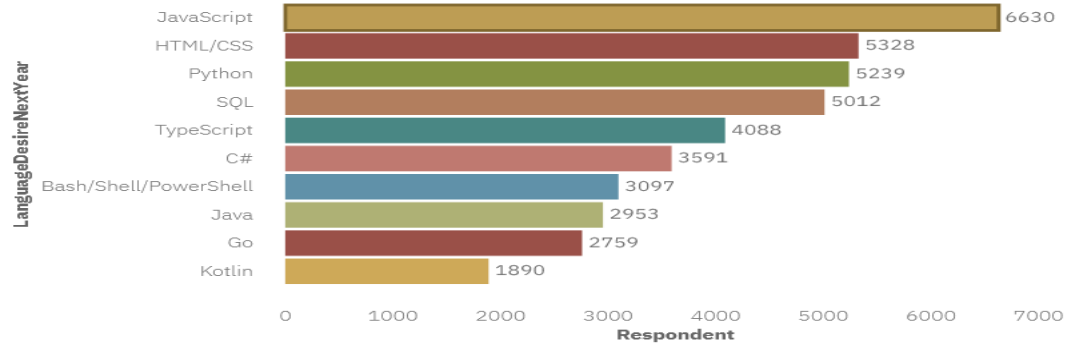
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DASHBOARD TAB 1

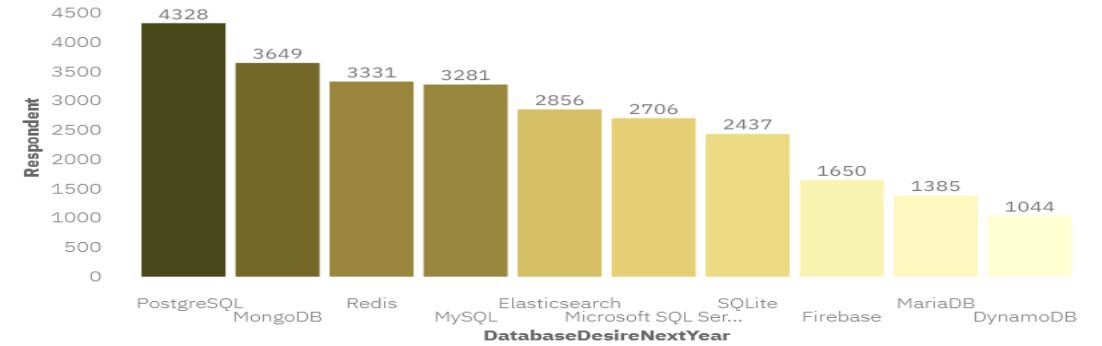


DASHBOARD TAB 2

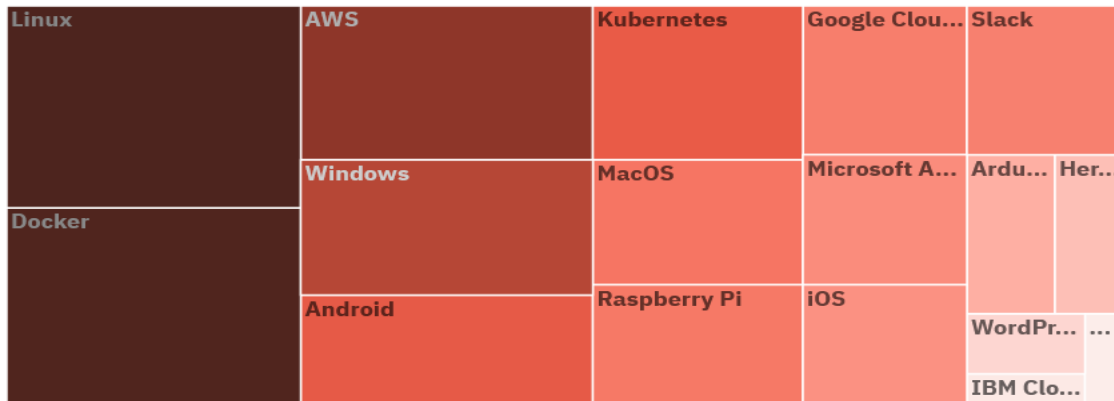
Top 10 Language Desire Next Year



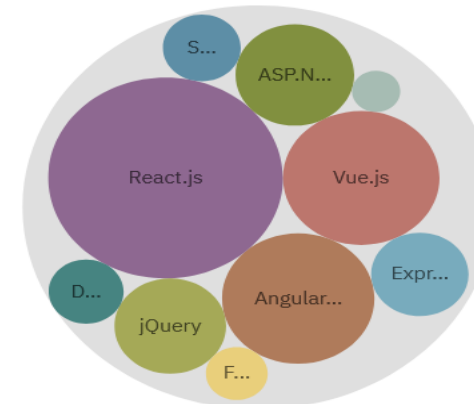
Top 10 Language Desire Next Year



Platform Desire Next Year



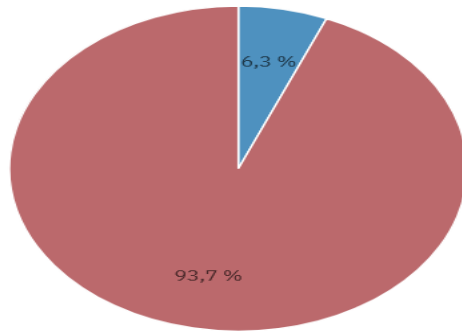
Top10 WebFrame Desire Next Year



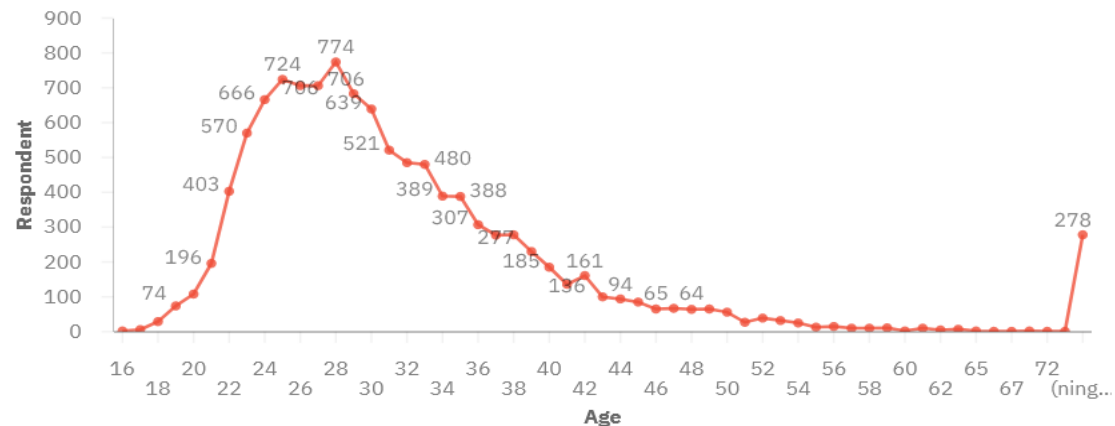
DASHBOARD TAB 3

Respondent Classified by Gender

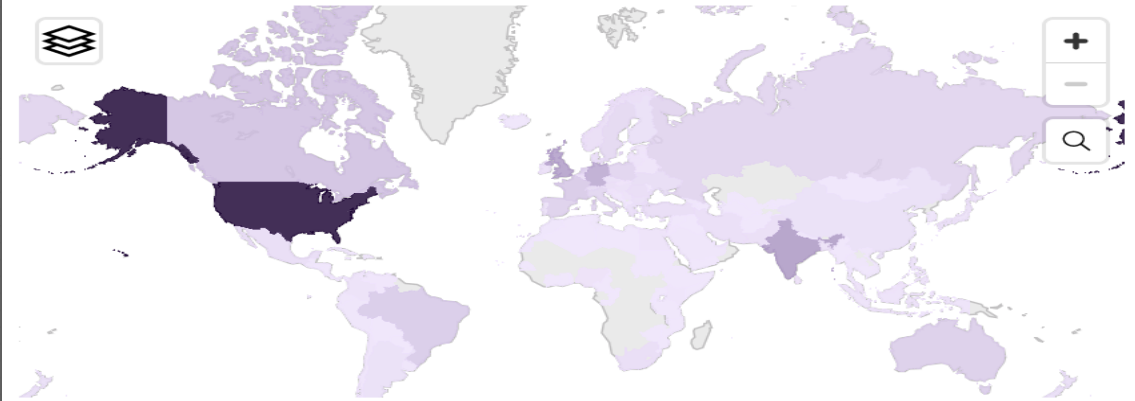
Gender
● Woman ● Man



Respondent Count by Age



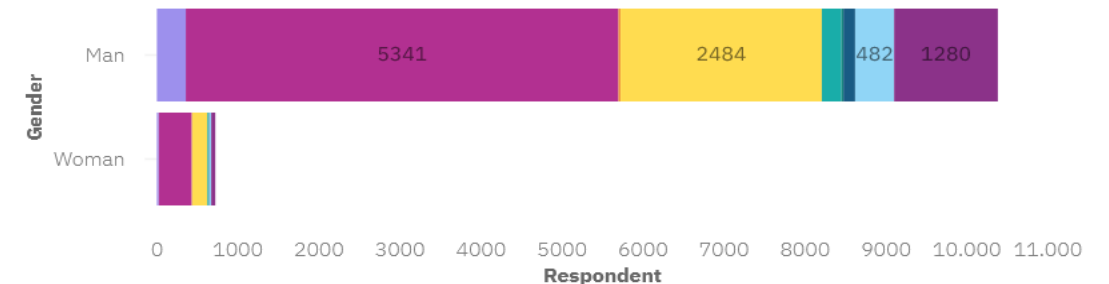
Respondent Count for Countries



Respondent Count by Gender, Classified by Formal Education

EdLevel

● Associate degree
● Bachelor's degree (BA, BS, B.E...
● I never completed any formal ...
● Master's degree (MA, MS, M.E...
● Other doctoral degree (Ph.D, E...
● Primary/elementary school



DISCUSSION



- Developers' views on current and future technology trends
- Gender gap in this sector. Only 6,3% of women participate in this survey. High possibility of gender biased results.
- Can we keep up with this pace of technological change?
- Technological differences between countries

OVERALL FINDINGS & IMPLICATIONS

Findings

- Technologies change every year
- Most respondents come from USA and India. Lack of global representation
- Cloud computing is increasing year by year

Implications

- Flexibility is a must in tech market
- Training and reskilling will be crucial in the future
- Hiring people will become harder due to quick changes in job market

CONCLUSION

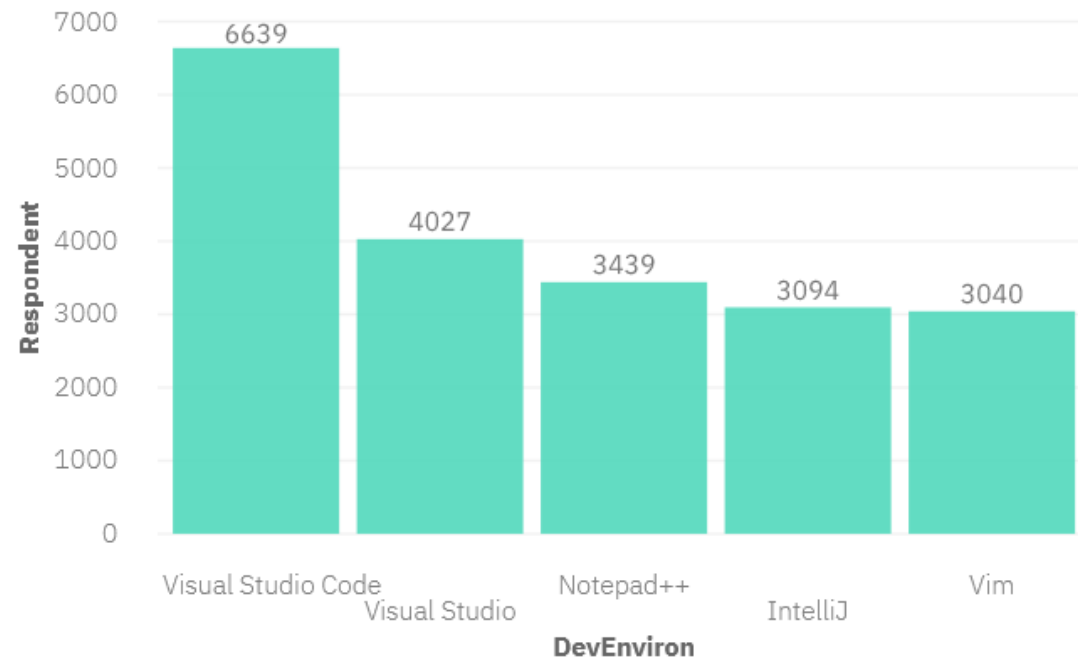


- Programming Languages, Databases and Platform overview
- Demographic characteristic of people working in tech
- Trends and salaries prediction would depend on AI software's instead of recruiters
- Higher demand in Web Development and Data Science positions.

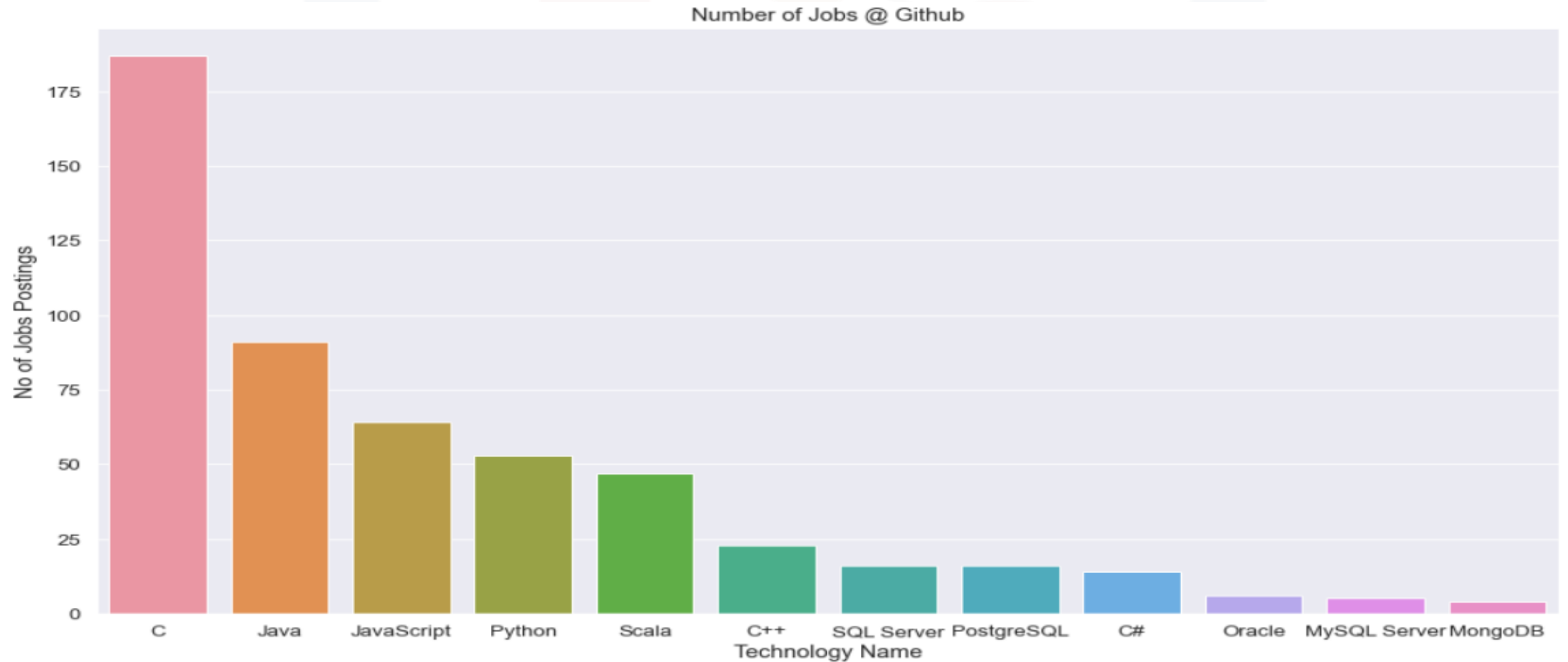
APPENDIX



Top 5 Development Environments



JOB POSTINGS



POPULAR LANGUAGES

