



Trends in Technology and Analysis

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OUTLINE



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- Methodology
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 - Visualization – Charts
 - Dashboard
- Discussion
 - Findings & Implications
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EXECUTIVE SUMMARY



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

INTRODUCTION



- This presentation analyzes the trends in software development
- It sets to answer the following questions:
 - What are the top programming languages in demand?
 - What are the top database skills in demand?
 - What are the popular IDEs?
 - What skills and languages will be in future demand?
- 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

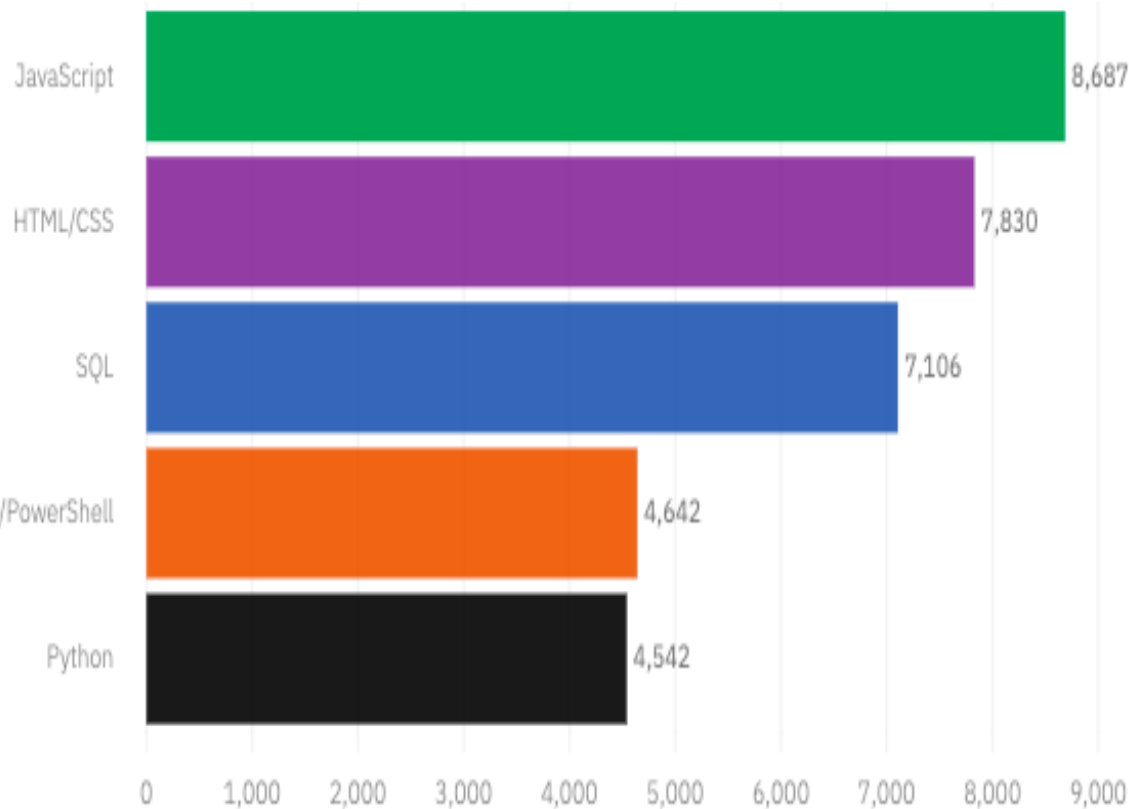
RESULTS:



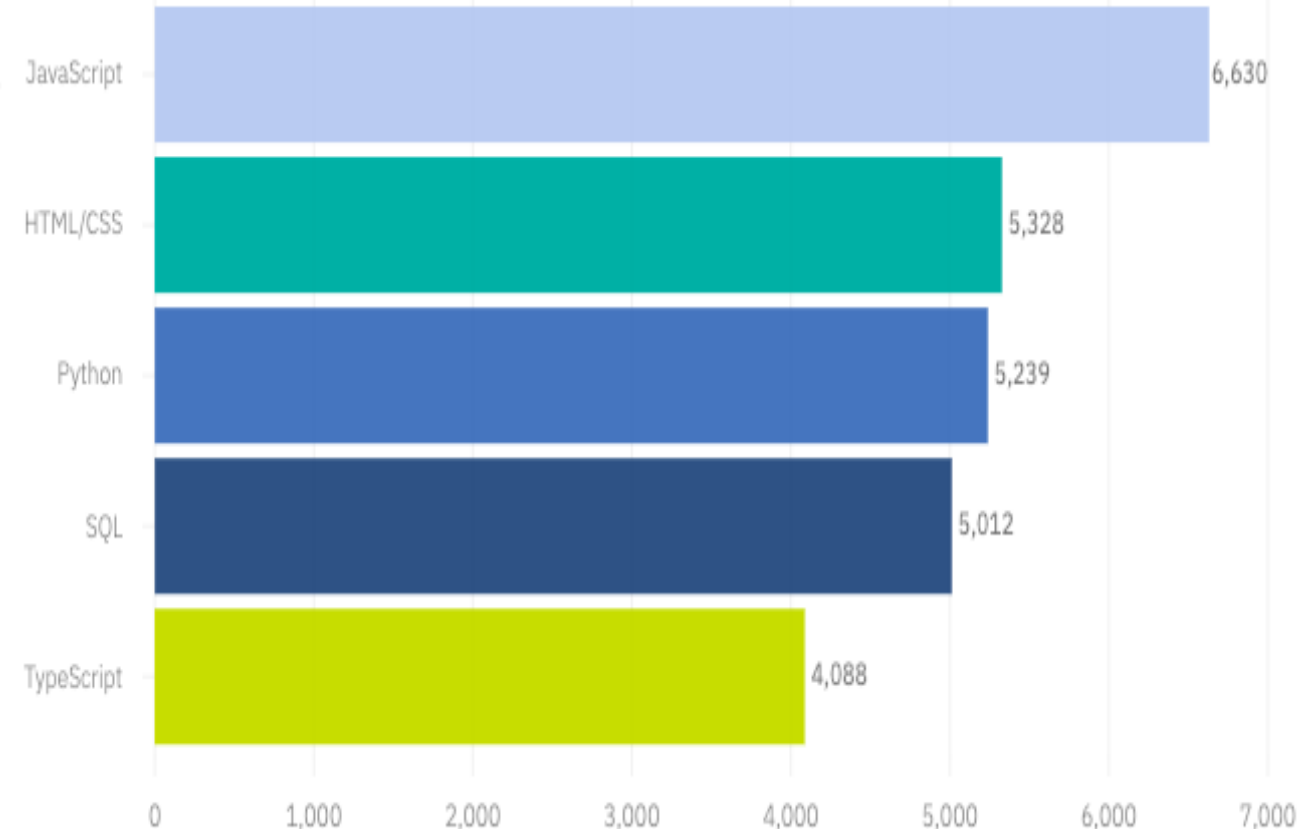
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PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

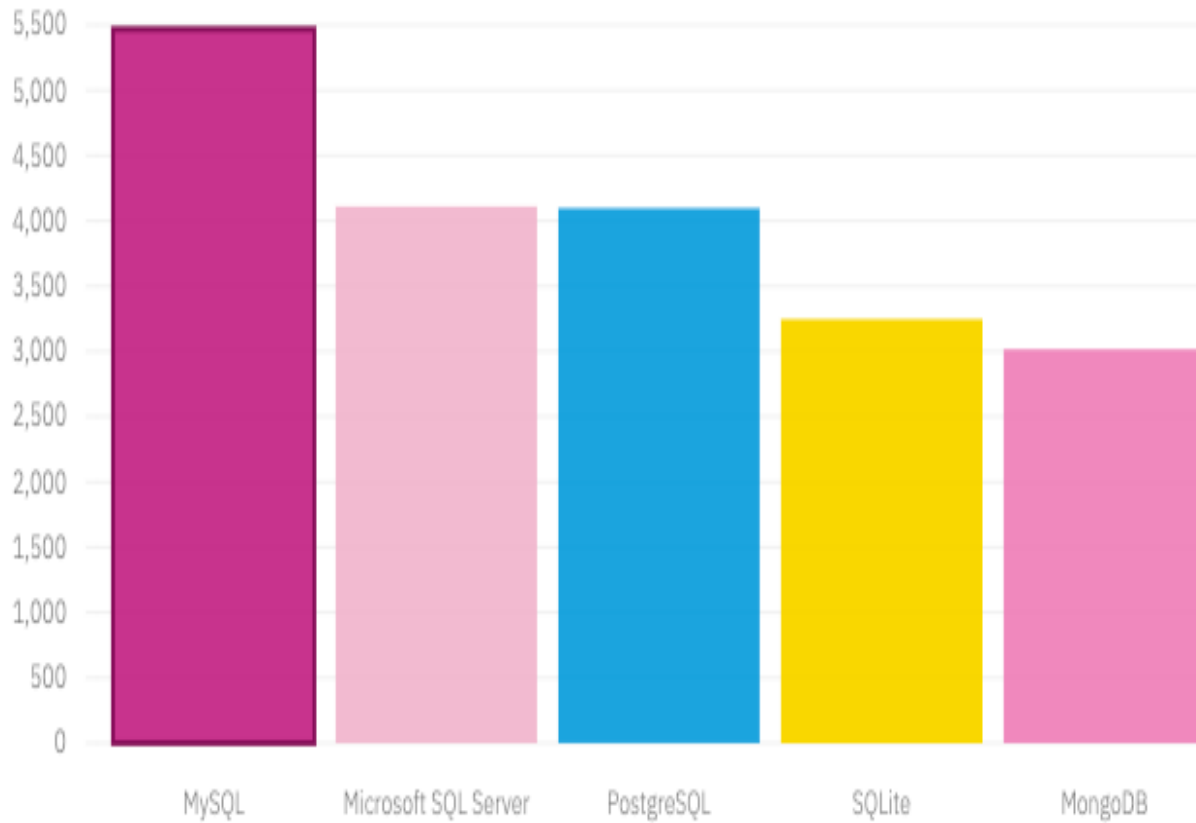
- JavaScript, HTML/CSS, SQL are top 3 this year
- Python and Typescript becoming popular next year
- PowerShell edged out in next year

Implications

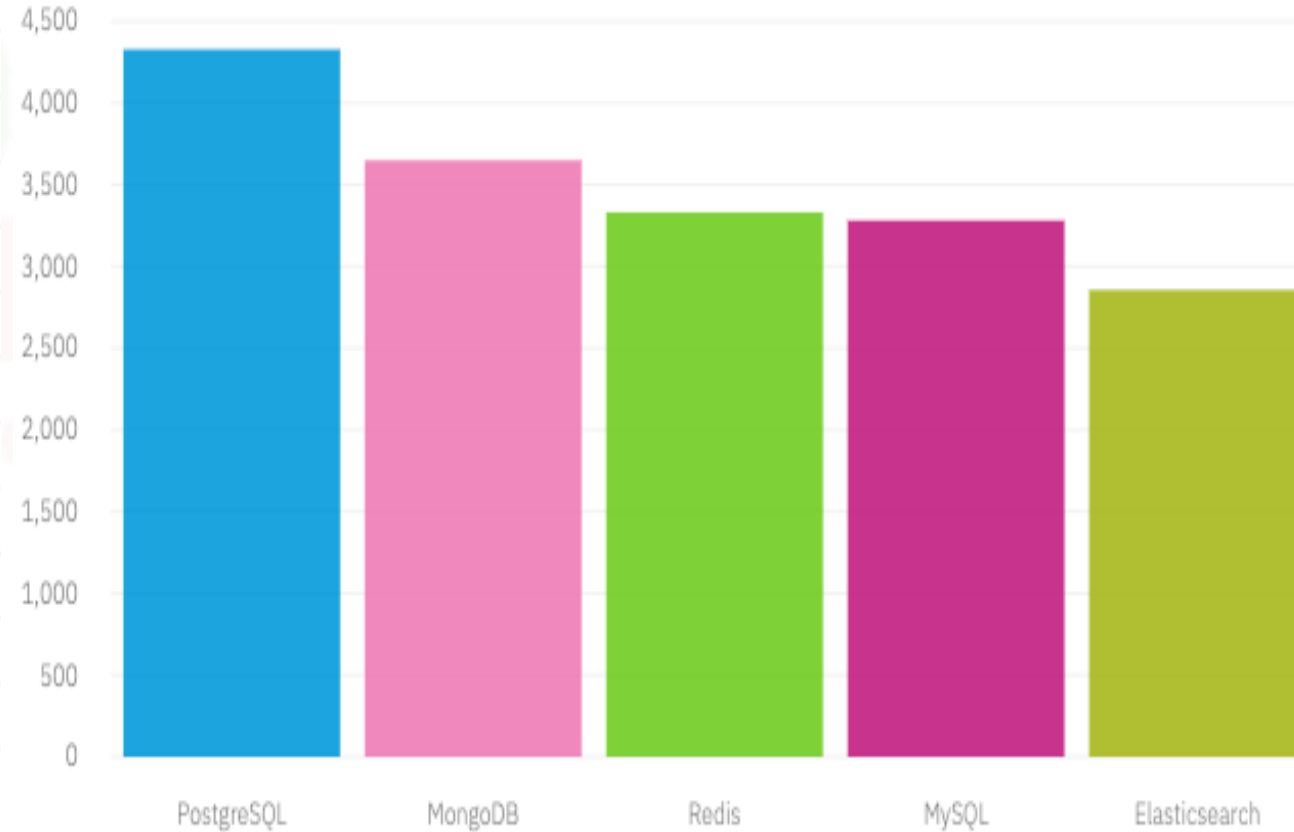
- Web development are still in high demand
- Big Data technology in companies still requires SQL
- With AI and ML in rising demand, Python is best choice

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is the most popular
- Behind is Microsoft SQL
- MongoDB and Redis are upcoming favorites
- Elasticsearch can be thought of as the new kid on the block

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://dataplatform.cloud.ibm.com/dashboards/cca5ed10-1b58-479d-a3fc-3560df10d1d6/view/4063c00639ad71cf44d0e6e4079f2f542f64735db2bbd15782817b490a647897a8381693c87d1a08da160364a6ec400f9b>

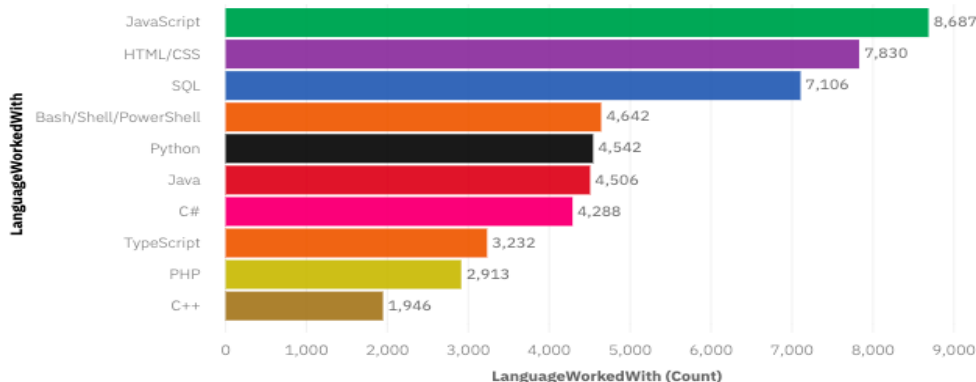
DASHBOARD TAB 1

Current Technology Usage

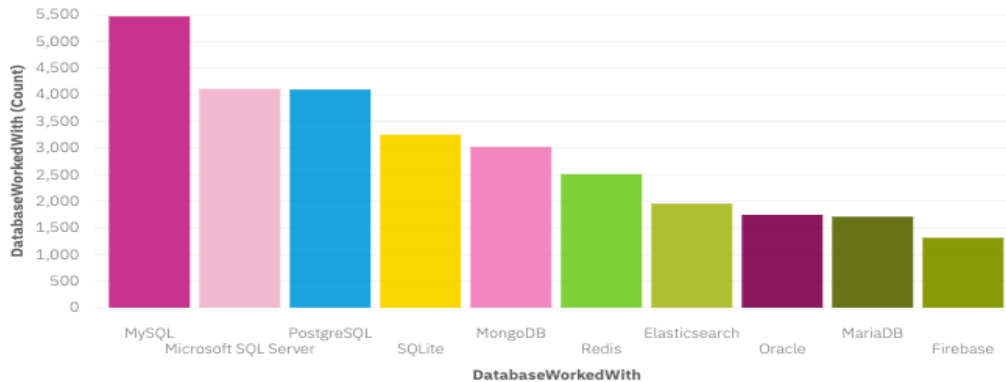
Future Technology Trend

Demographics

Top 10 LanguageWorkedWith



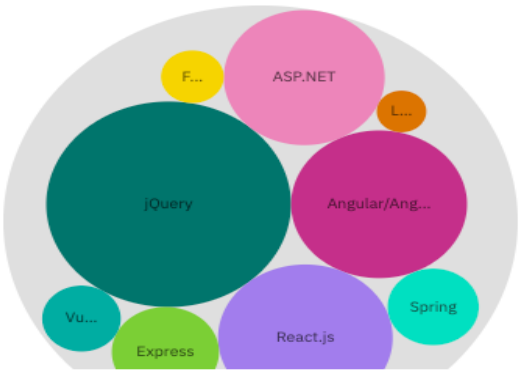
Top 10 DatabaseWorkedWith



PlatformWorkedWith



Top 10 WebFrameWorkedWith

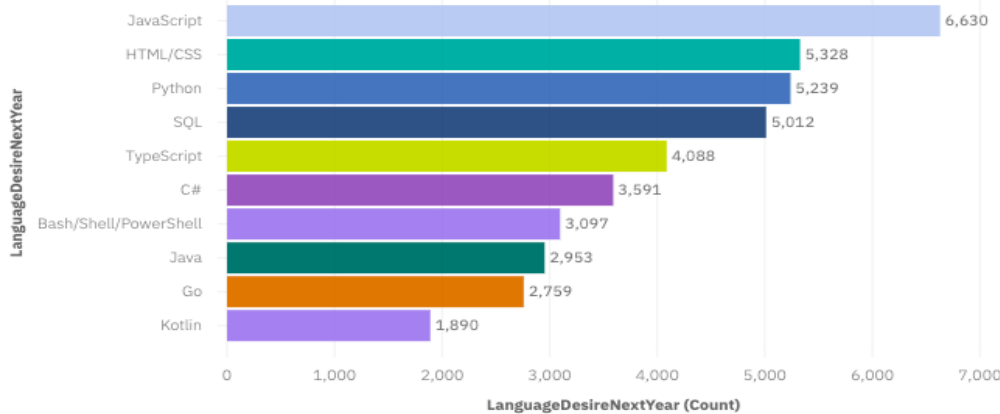


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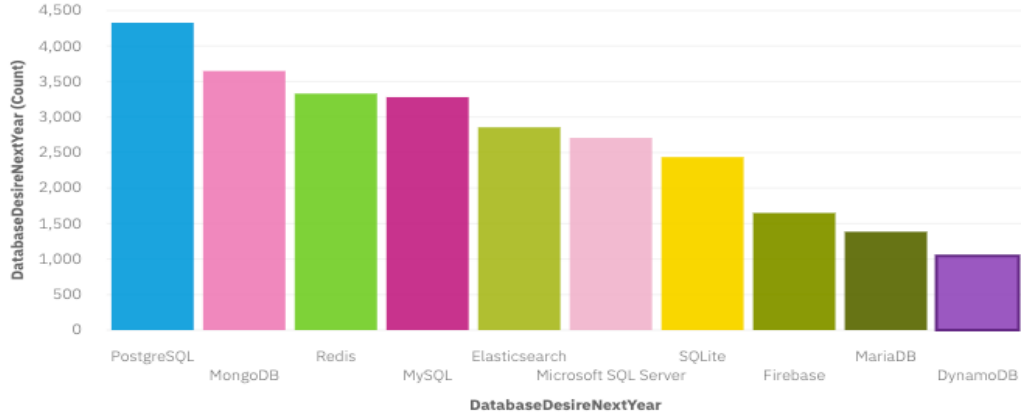
DASHBOARD TAB 2

Current Technology Usage **Future Technology Trend** Demographics

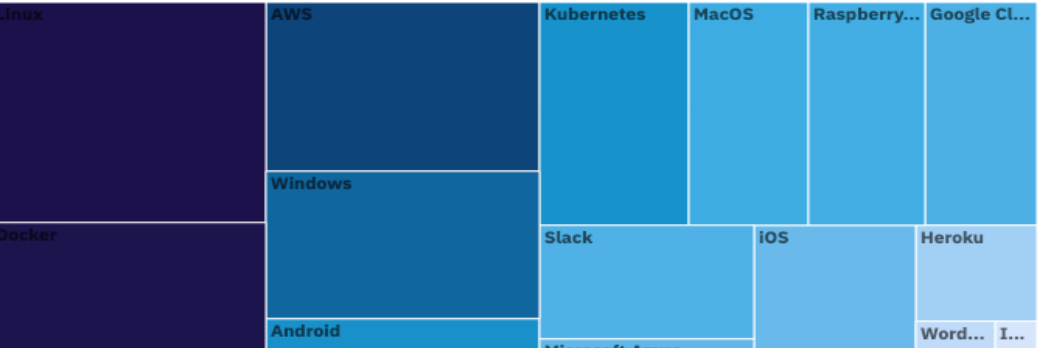
Top 10 LanguageDesireNextYear



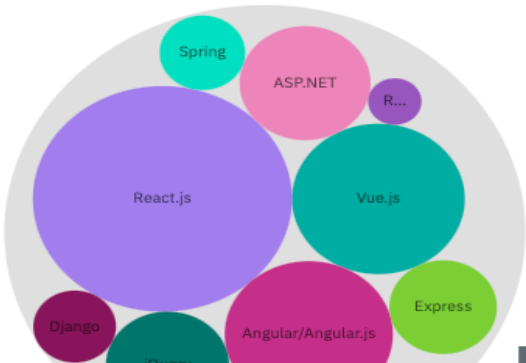
Top 10 DatabaseDesireNextYear



PlatformDesireNextYear



Top 10 WebFrameDesireNextYear

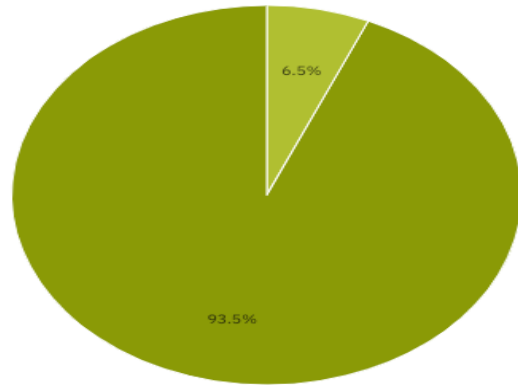


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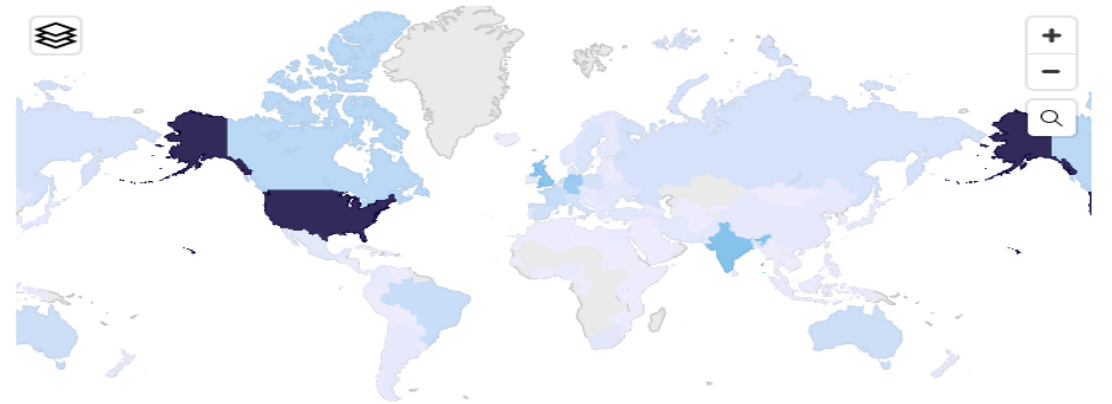
DASHBOARD TAB 3

Current Technology Usage Future Technology Trend Demographics

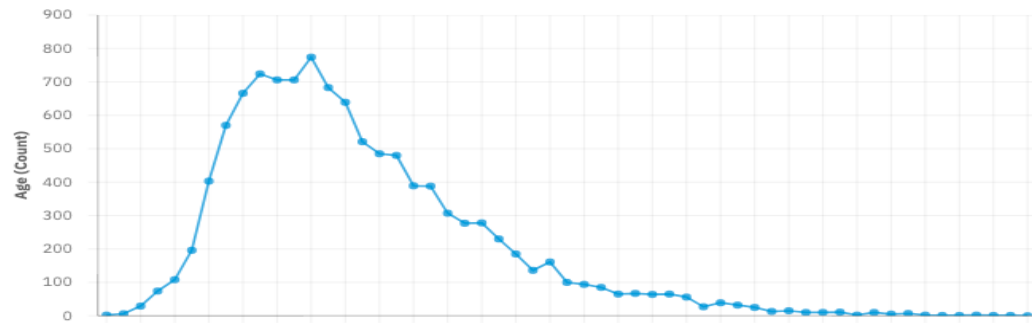
Respondent classified by Gender



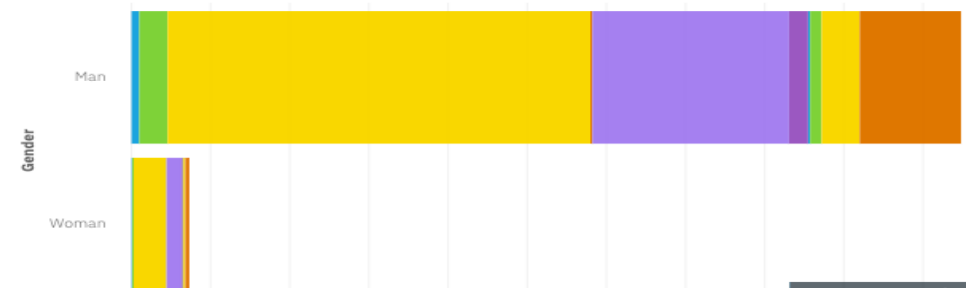
Respondent Count for Countries



Respondent Count by Age



Respondent Count by Gender, classified by Formal Education Level



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DISCUSSION



- Current and future technology trends
- Training and reskilling workers
- Female presence in the technology field
- Bridge divide in technology gaps in developing countries
- Eliminate age and education discrimination in employment

OVERALL FINDINGS & IMPLICATIONS

Findings

- Rapid 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

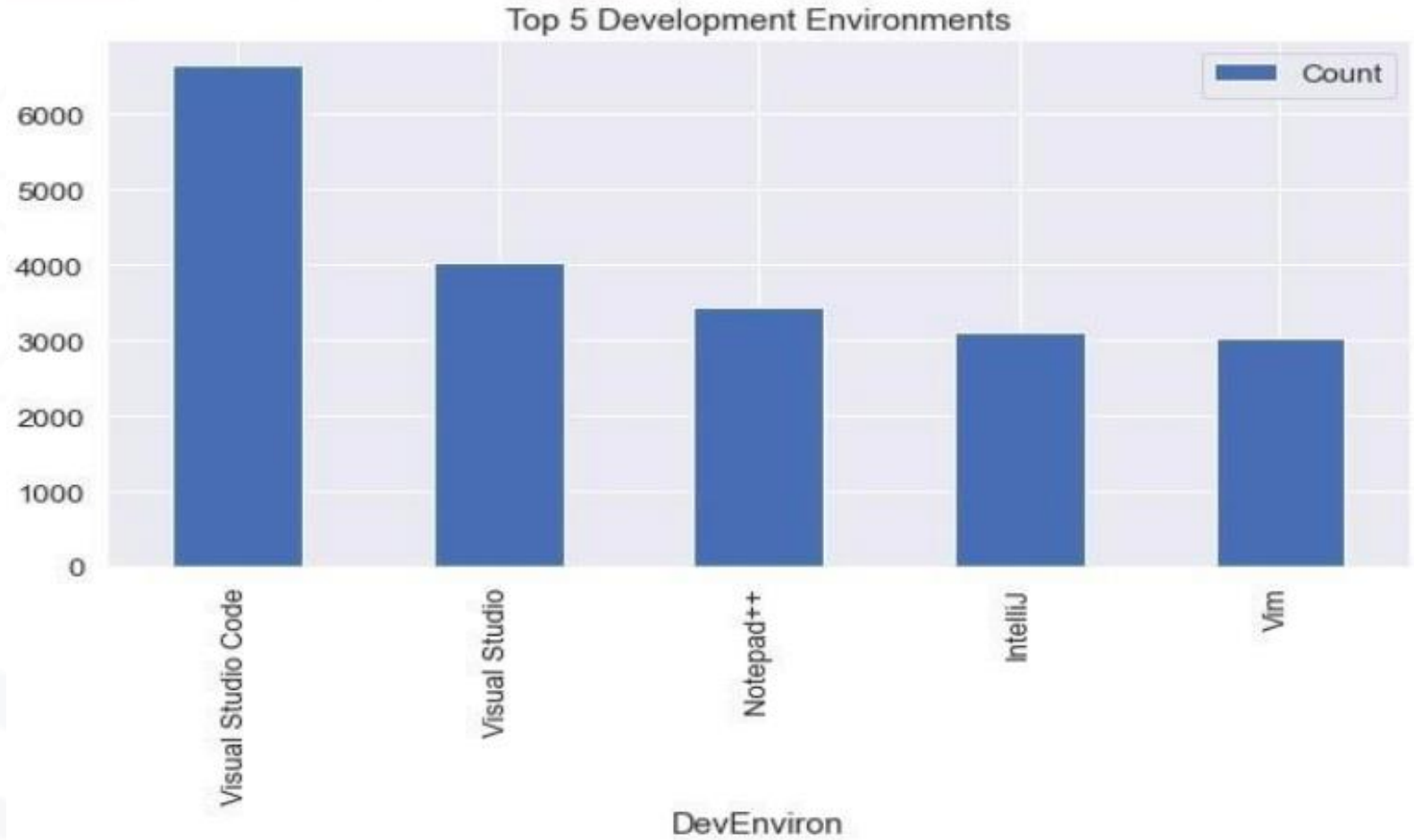
- Companies need to be flexible and adjust to rapid changes
- Need to spread technology out to lagging countries
- Impact of job hiring's
- Shift to faster app deployments and cloud services in future

CONCLUSION

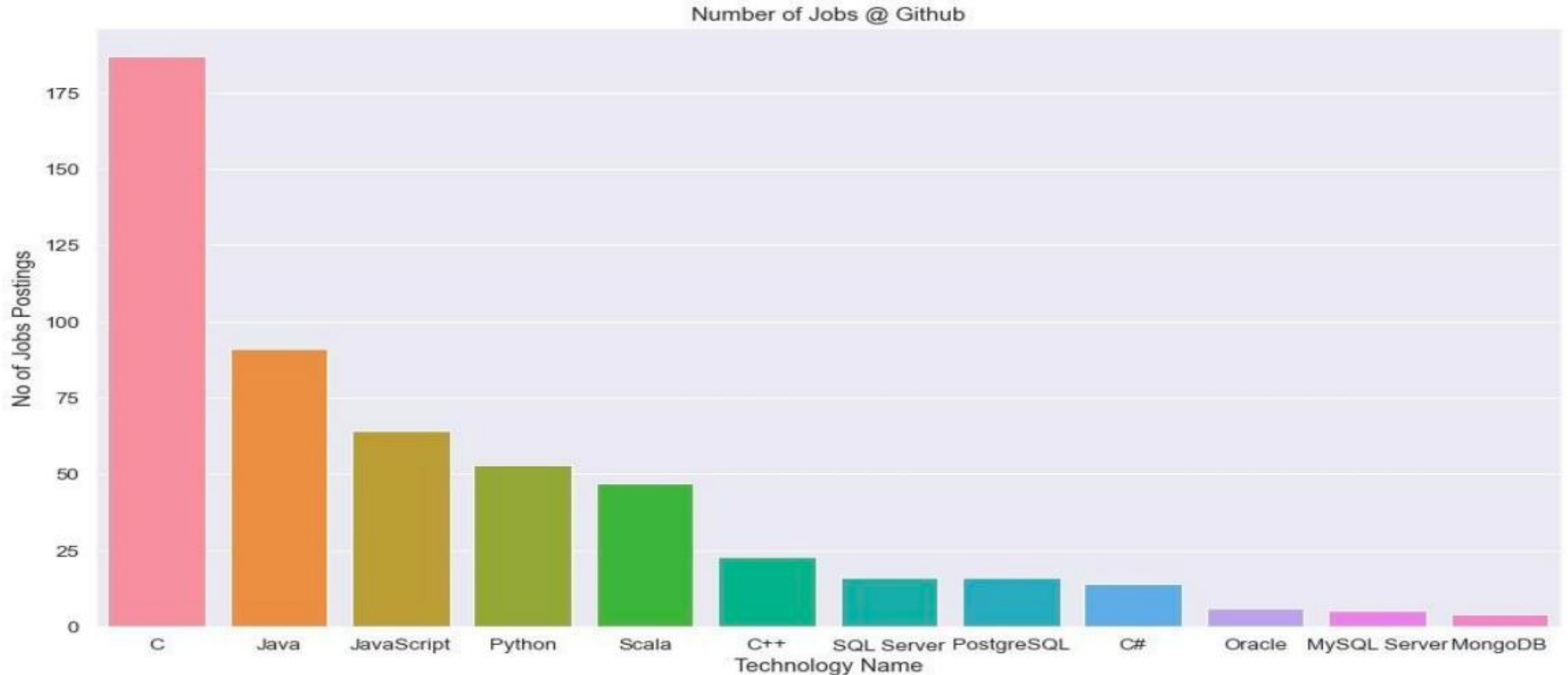


- Technology trends for current and next year
- Overview of programming languages, database and platform
- Overview of demographics
- Actions to be taken
- In the future incorporate Machine Learning to predict trends and salaries

APPENDIX



GITHUB JOB POSTINGS



POPULAR LANGUAGES

