



# Current & Future 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

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- As technology continues to advance, data professionals and developers are required to be adept at handling various tools and programming languages
- Types of technology
  - Programming languages
  - Databases
  - Platforms
  - Web Frames
- Objective: Analyze current and future technology trends

# INTRODUCTION

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- This report aims to analyze the trends of usage of current and future technology
- Purpose and Questions for Analysis
  - Identify technology trends and skills in demand
  - What are the top used and desired programming languages
  - What are the top used databases skills sought after?
  - What collaboration technology tools are in demand?
- This Analysis could be valuable to future data analytics professionals and data scientists

# METHODOLOGY

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- Data Collection Source:
  - Data comes from Stack Overflow - Annual Developer Survey
  - Source:  
<https://insights.stackoverflow.com/survey>
- Data Exploration
- Data Cleaning
- Data Visualization
- Presentation
  - Dashboard 1: Current Technology Usage
  - Dashboard 2: Future Technology Trend
  - Dashboard 3: Demographics

# RESULTS

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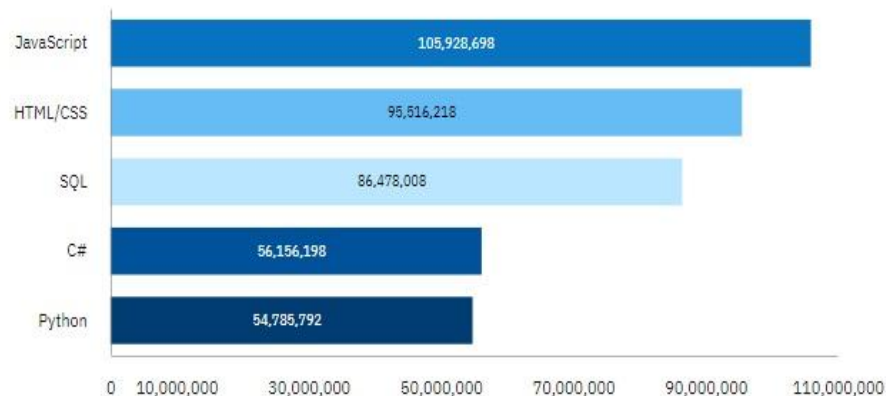
# PROGRAMMING LANGUAGE TRENDS

## Current Year

Top 5 Programming Languages Worked With

LanguageWorkedWith

● C# ● HTML/CSS ● JavaScript ● Python ● SQL

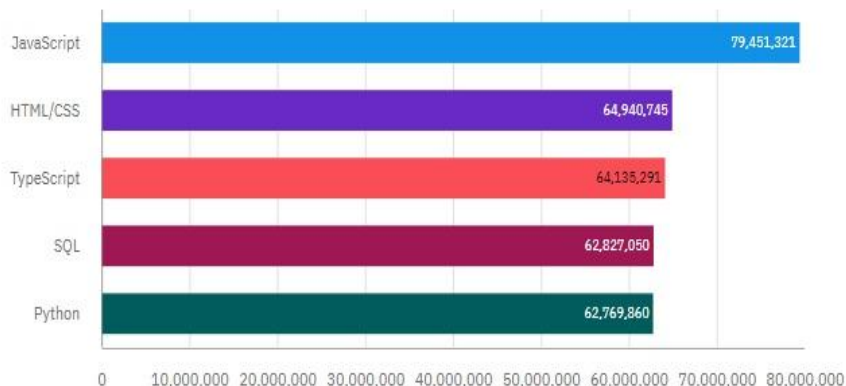


## Next Year

Top 5 Programming Languages Desired Next Year

LanguageDesireNextYear

● HTML/CSS ● JavaScript ● Python ● SQL ● TypeScript



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- **JavaScript** is the most used programming language in the present and in the future
- **HTML/CSS** is the second most popular language now and in the next year
- **Python** is gaining popularity and becoming more used by professional developers and data professionals

## Implications

- Web development is still in high demand despite the emergence of new programming languages
- While SQL is an essential skill, learning other emerging programming languages is indispensable
- With the rise of ML and AI, Python is a must-to-have skill



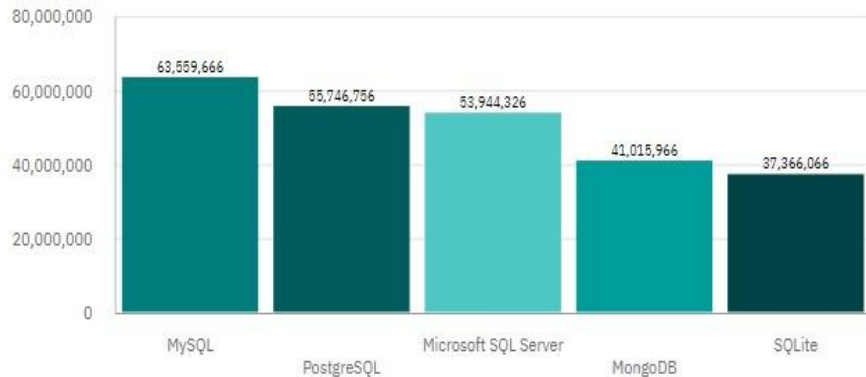
# DATABASE TRENDS

## Current Year

Top 5 Database Worked With

DatabaseWorkedWith

Microsoft SQL Server   MongoDB   MySQL   PostgreSQL  
SQLite

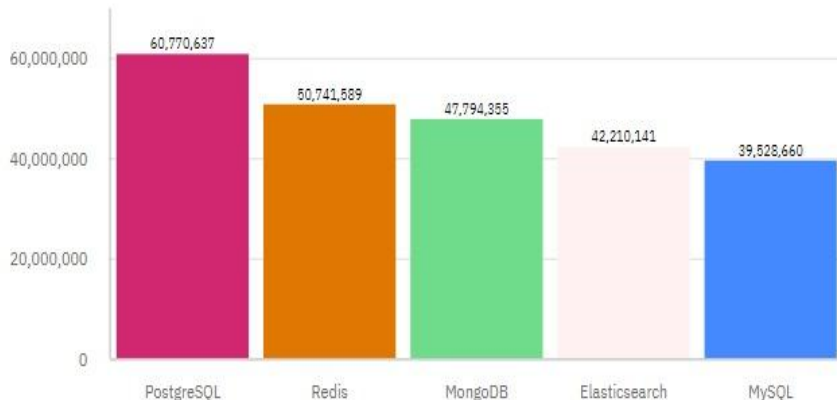


## Next Year

Top 5 Database Desired Next Year

DatabaseDesireNextYear

Elasticsearch   MongoDB   MySQL   PostgreSQL   Redis



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- **MySQL** is the most popular database
- **PostgreSQL** and **Microsoft SQL Server** are the second most used databases by professionals
- Emerging databases such as **MongoDB** and **Redis** are getting more popularity

## Implications

- Learning MySQL before embarking on a data analytics journeys is highly recommended
- Being familiar with additional databases such as PostgreSQL and MongoDB is a huge advantage
- Learning other databases increase the competitiveness in the job market

# DASHBOARD

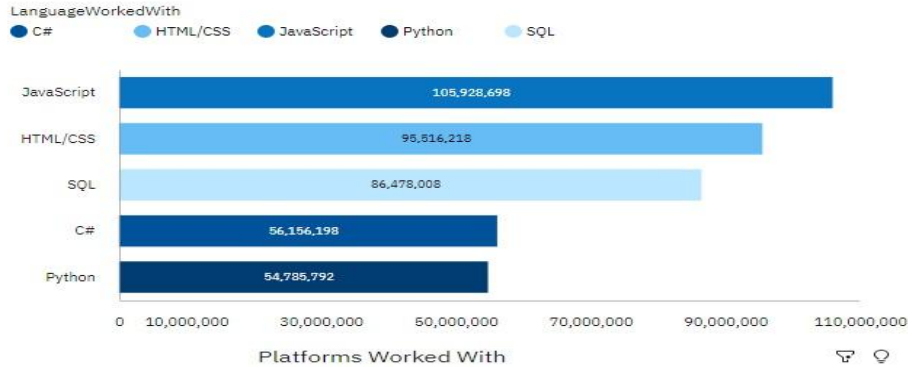
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[https://github.com/amedodo/edx\\_course\\_d  
ataanalytics\\_capstoneproject](https://github.com/amedodo/edx_course_d<br/>ataanalytics_capstoneproject)

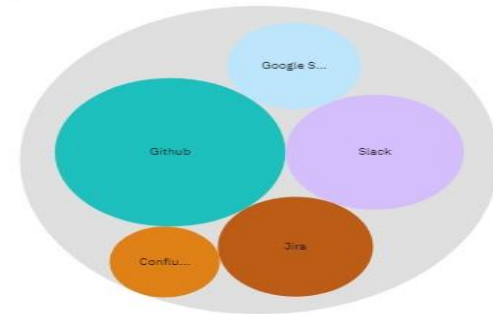
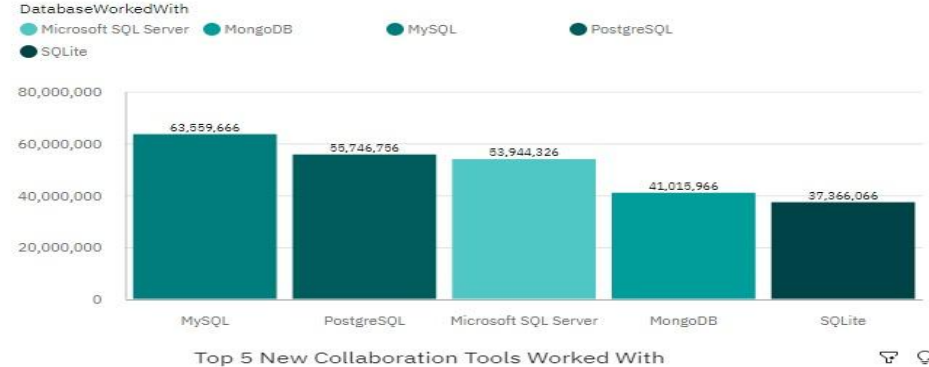


# DASHBOARD TAB 1

Top 5 Programming Languages Worked With

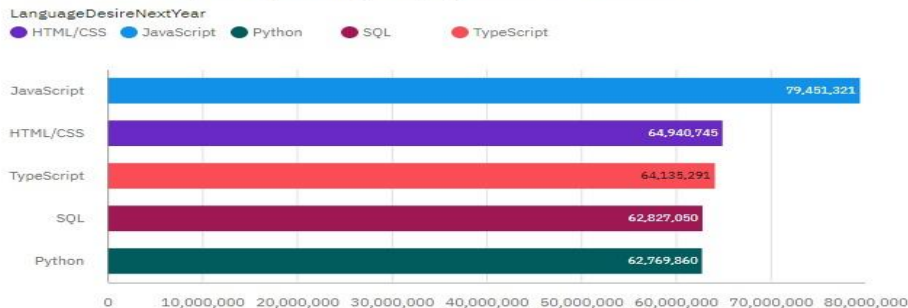


Top 5 Database Worked With

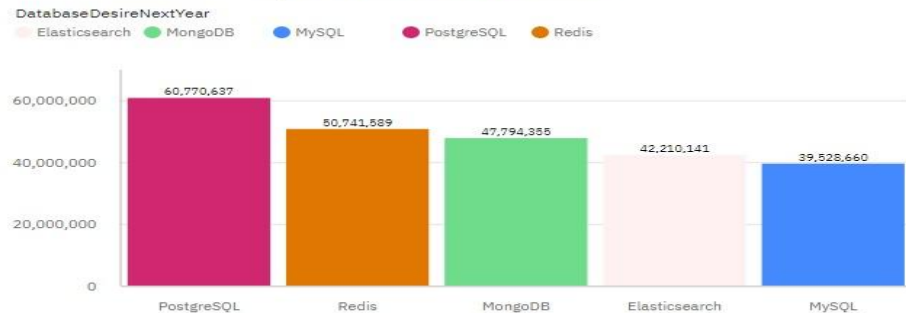


# DASHBOARD TAB 2

## Top 5 Programming Languages Desired Next Year



## Top 5 Database Desired Next Year



## Collaboration Platforms Desired Next Year

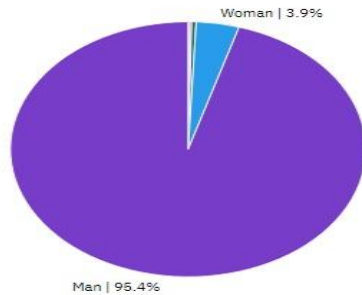


## Top 5 New Collaboration Tools Desire Next Year

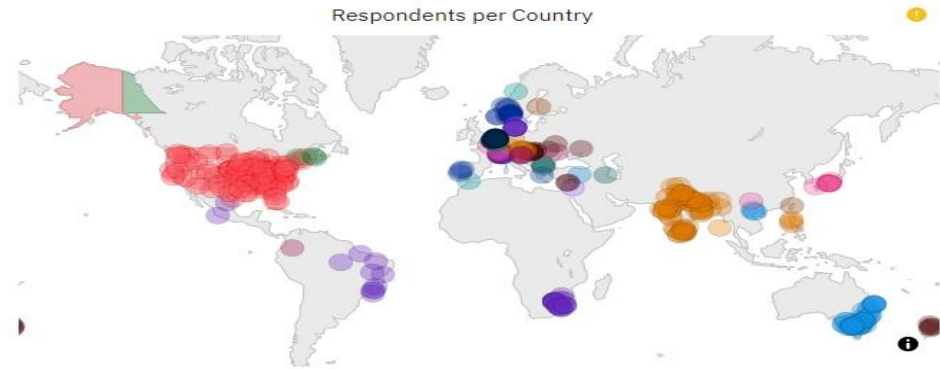


# DASHBOARD TAB 3

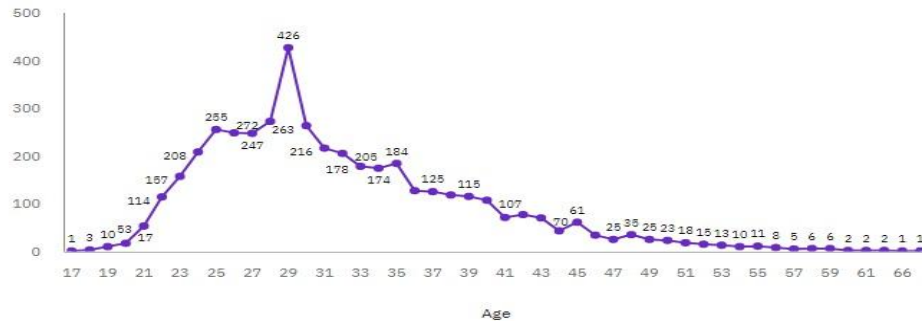
Respondents by Gender



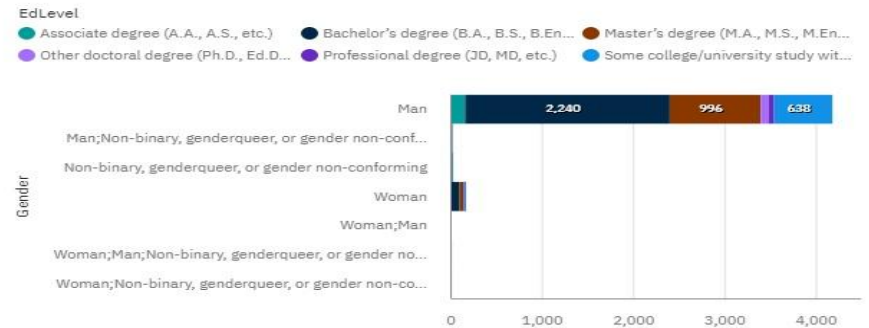
Respondents per Country



Respondents by Age



Respondent Count by Gender, classified by Formal Education Level



# DISCUSSION

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- Learning various programming languages to remain competitive in the job market
- New emerging programming languages will be in high demand in the future
- Reskilling professional developers and data professionals is essential to keep up with future trends

# OVERALL FINDINGS & IMPLICATIONS

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## Findings

- Technology is changing at a very fast pace
- The usage of platforms such as Docker & AWS is growing rapidly
- Programming languages and databases such as JavaScript and MySQL are still in demand despite the emergence of alternatives

## Implications

- Shift to more efficient cloud services and tools is a necessity
- Job seekers need to adjust to rapid changes
- Although the usage of new programming languages is growing, learning existing ones is still indispensable



# CONCLUSION

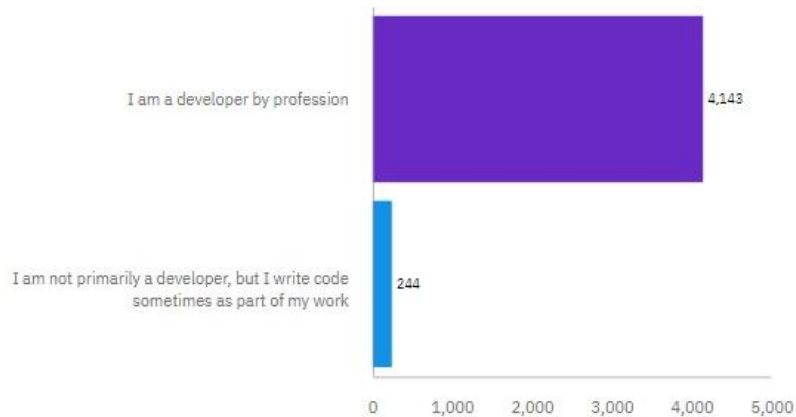
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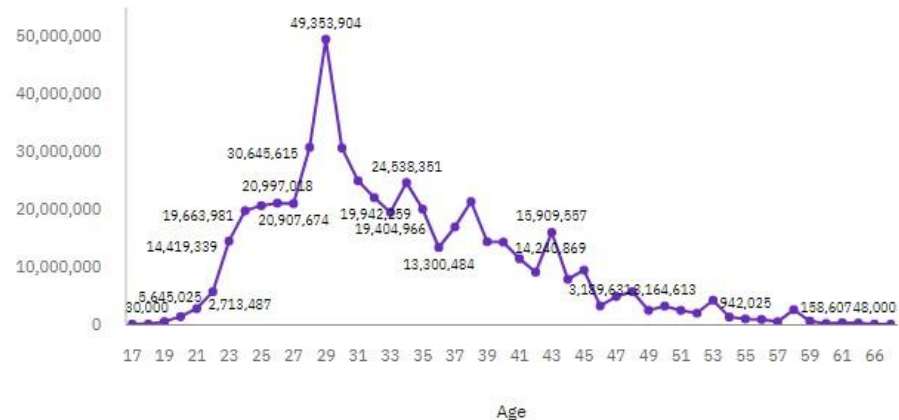
- To start a data professional career, it is essential to learn multiple programming languages and databases to keep up with the new trends
- Web development programming languages and SQL databases are a highly recommended skills to acquire
- Learning growing programming languages such as Python gives a tremendous competitive advantage in the job market

# APPENDIX

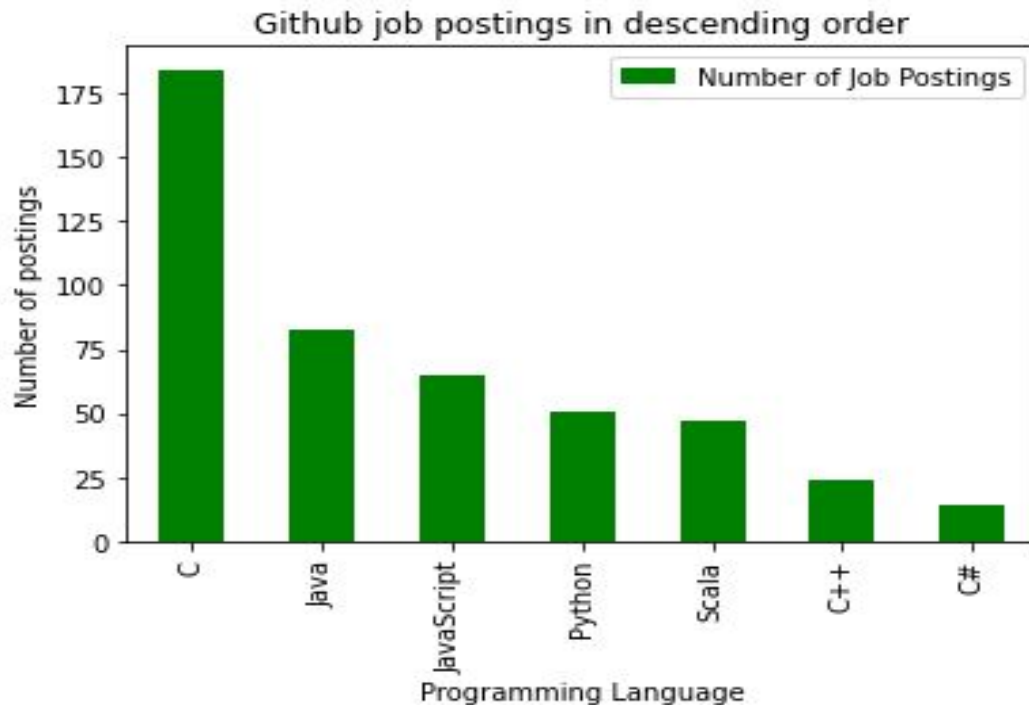
Respondents by Main Branch



Converted Compensation by Age



# GITHUB JOB POSTINGS



# POPULAR LANGUAGES

Programming Languages vs Average Annual Salary

