



# Technology Trends

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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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- Identify key trends in emerging technologies, focusing on programming languages, database skills, and developer demographics
- JavaScript and HTML/CSS remain the top programming languages with Python, Go and Kotlin gaining traction
- MySQL is the most used database, with PostgreSQL and MongoDB rising in popularity
- The data reveals a significant gender gap, with most developers being men aged 25-34
- These insights highlight the need for continued emphasis on web development, modern database adoption and initiatives to promote gender diversity and global representation in the tech industry

# INTRODUCTION

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- Identify trends for emerging technologies
- Asking the following questions:
  - Which programming languages are currently most sought after?
  - Which database skill are highly valued in the job market?
  - What are the insights and trends in the gender and age distribution of developers?

# METHODOLOGY

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- Data Sources:
  - GitHub Jobs API
  - Popular Programming Languages
  - Stack Overflow Survey
- Data Wrangling:
  - Finding and removing duplicate
  - Finding and imputing missing values
  - Normalizing Data(Compensation)
- Exploring the Data:
  - Analyzing the data distribution, handling outliers, looking for correlations
- Visualizing the Data
  - Distribution, relationships, composition and comparisons

# RESULTS

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- Programming Language Trends
- Database Trends
- Dashboards
  - Current Technology Trend
  - Future Technology Trend
  - Demographics

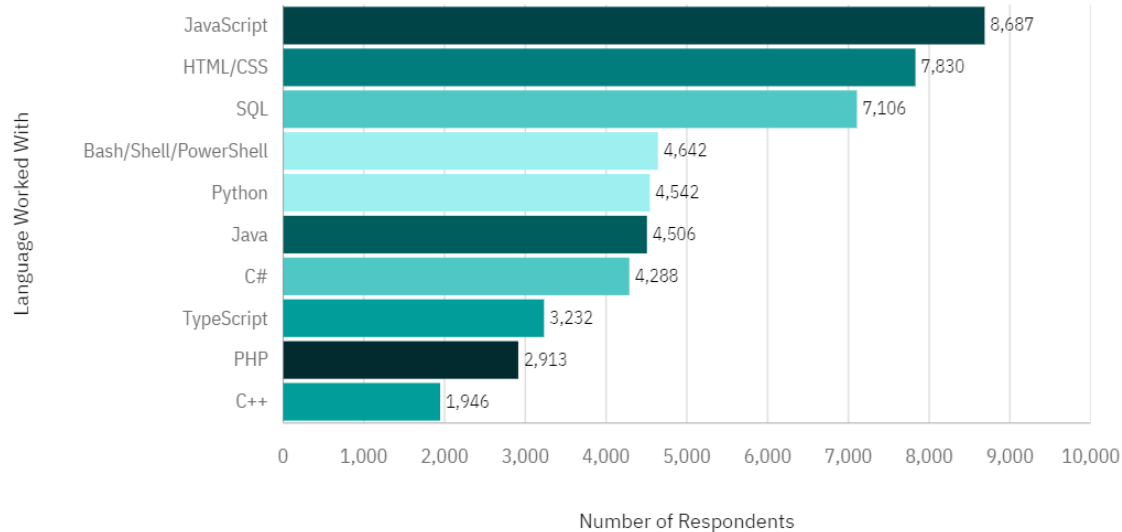


# PROGRAMMING LANGUAGE TRENDS

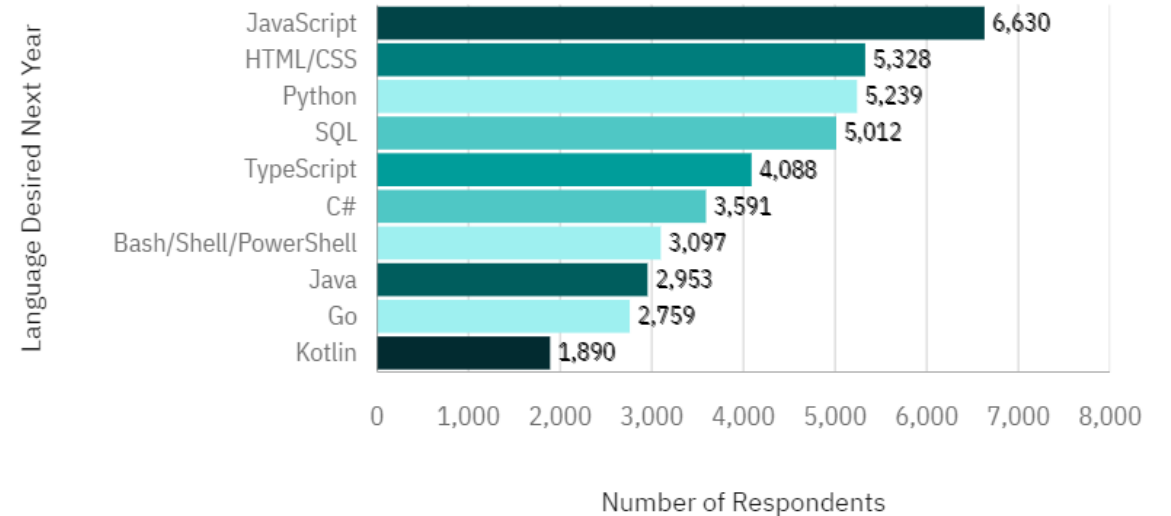
Current Year

Next Year

Top 10 Languages Worked With



Top 10 Languages Next Year



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- JavaScript & HTML/CCS top both top programming languages currently and next year
- Python is trending up from 5<sup>th</sup> to 3<sup>rd</sup> spot for next year
- GO & Kotlin appear on the top 10 list for next year while C++ & PHP fall off the list

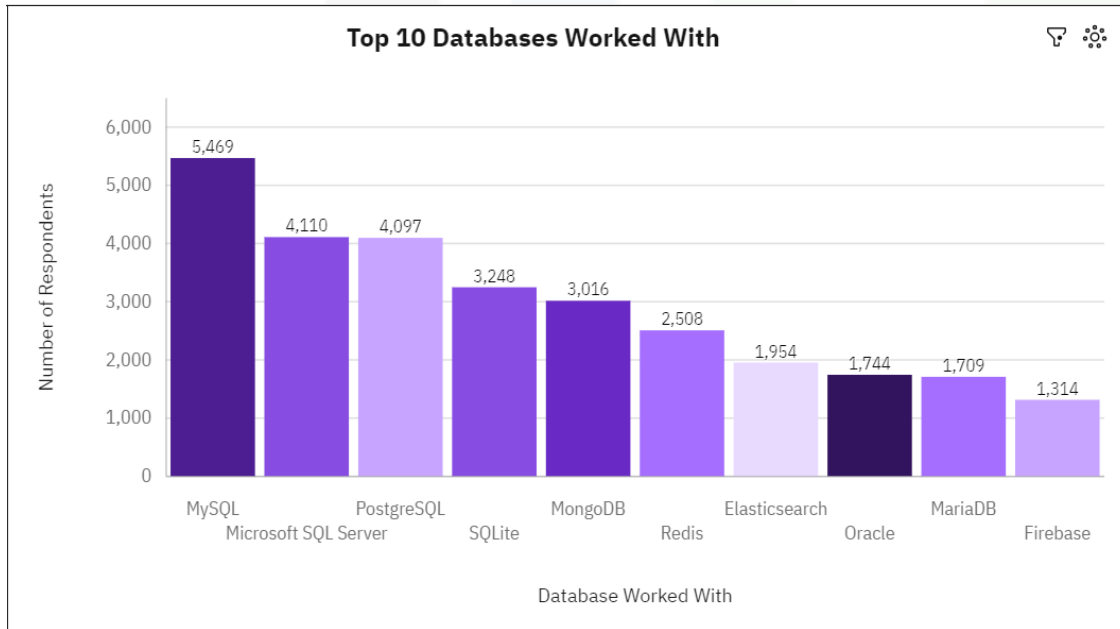
## Implications

- JavaScript & HTML/CSS are critical programming languages
- Choosing to learn Go or Kotlin might be a strategic move for differentiation.
- Companies currently using C++ and PHP might consider transitioning to more modern languages.

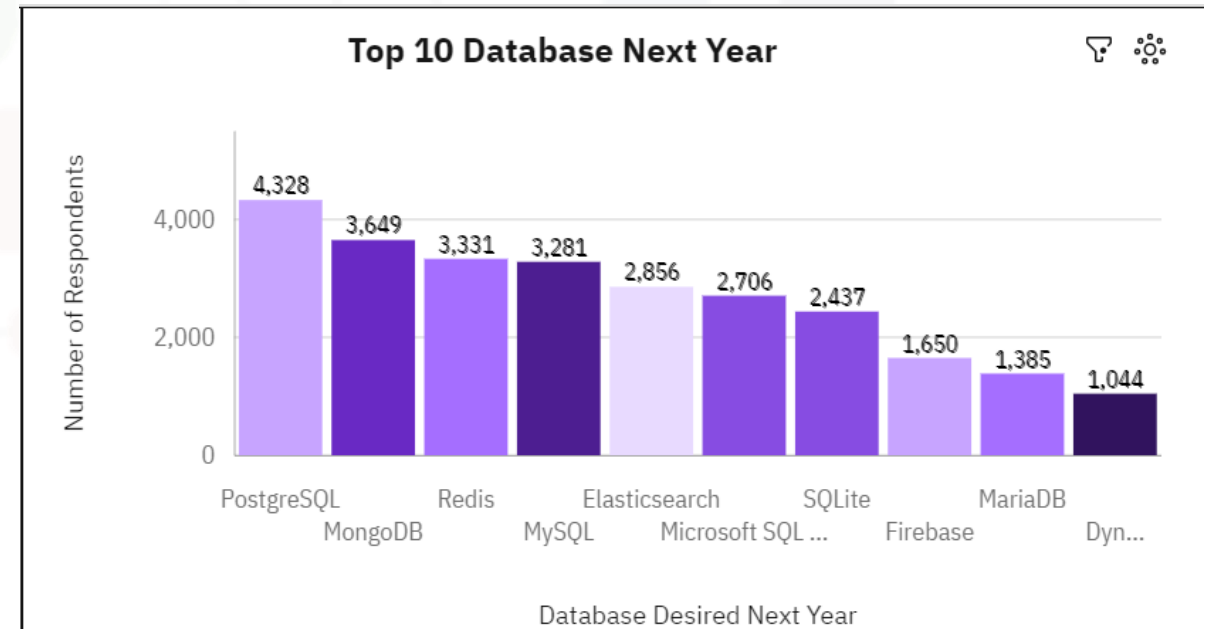


# DATABASE TRENDS

## Current Year



## Next Year



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- MySQL is the most frequently used database
- PostgreSQL tops the list for database next year
- MongoDB is 5<sup>th</sup> for current year and climbs to 2nd for next year

## Implications

- MySQL has widespread adoption as a reliable tool
- Learning PostgreSQL positions developers well in the job market
- Ongoing shift toward NoSQL databases

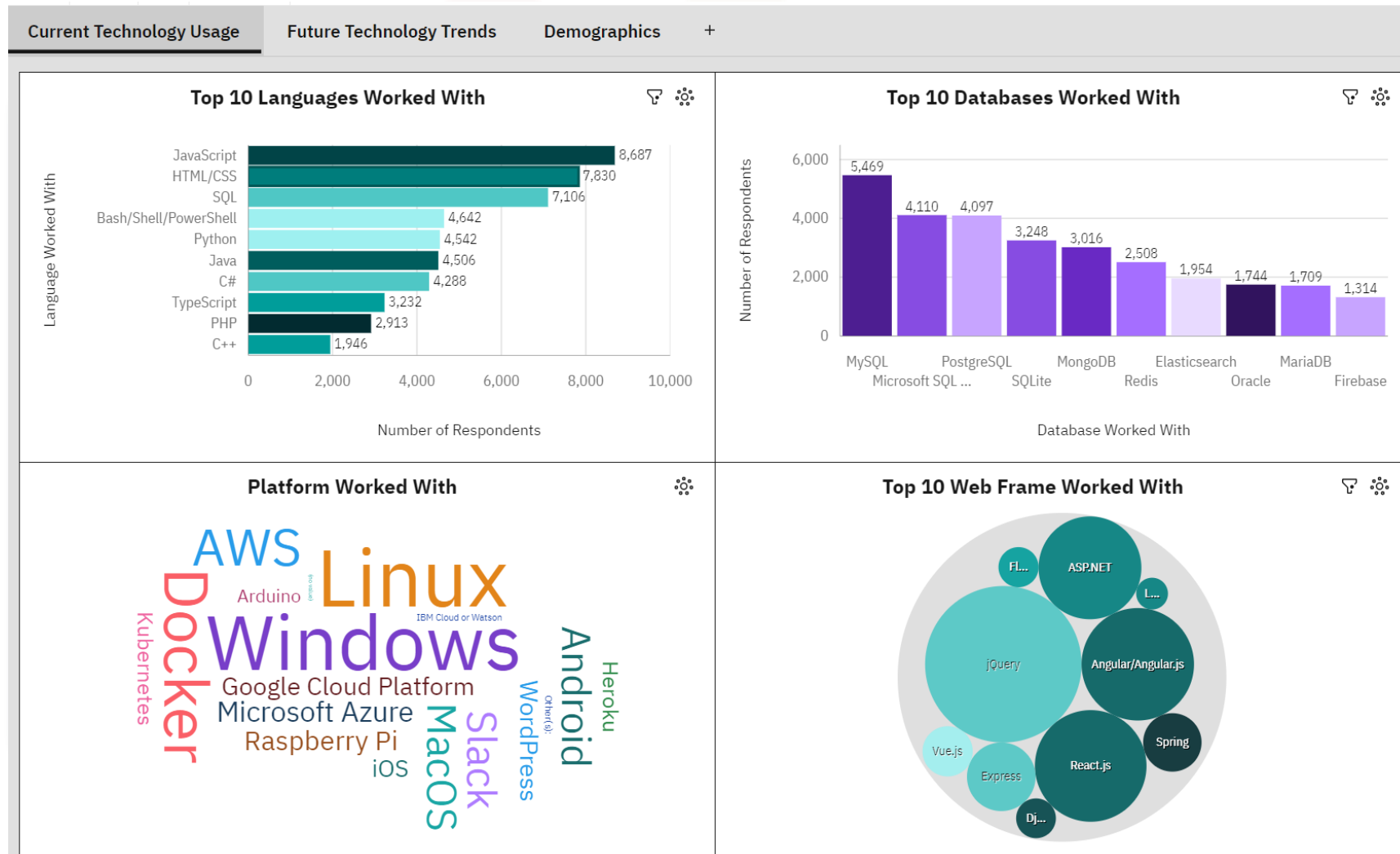
# DASHBOARD

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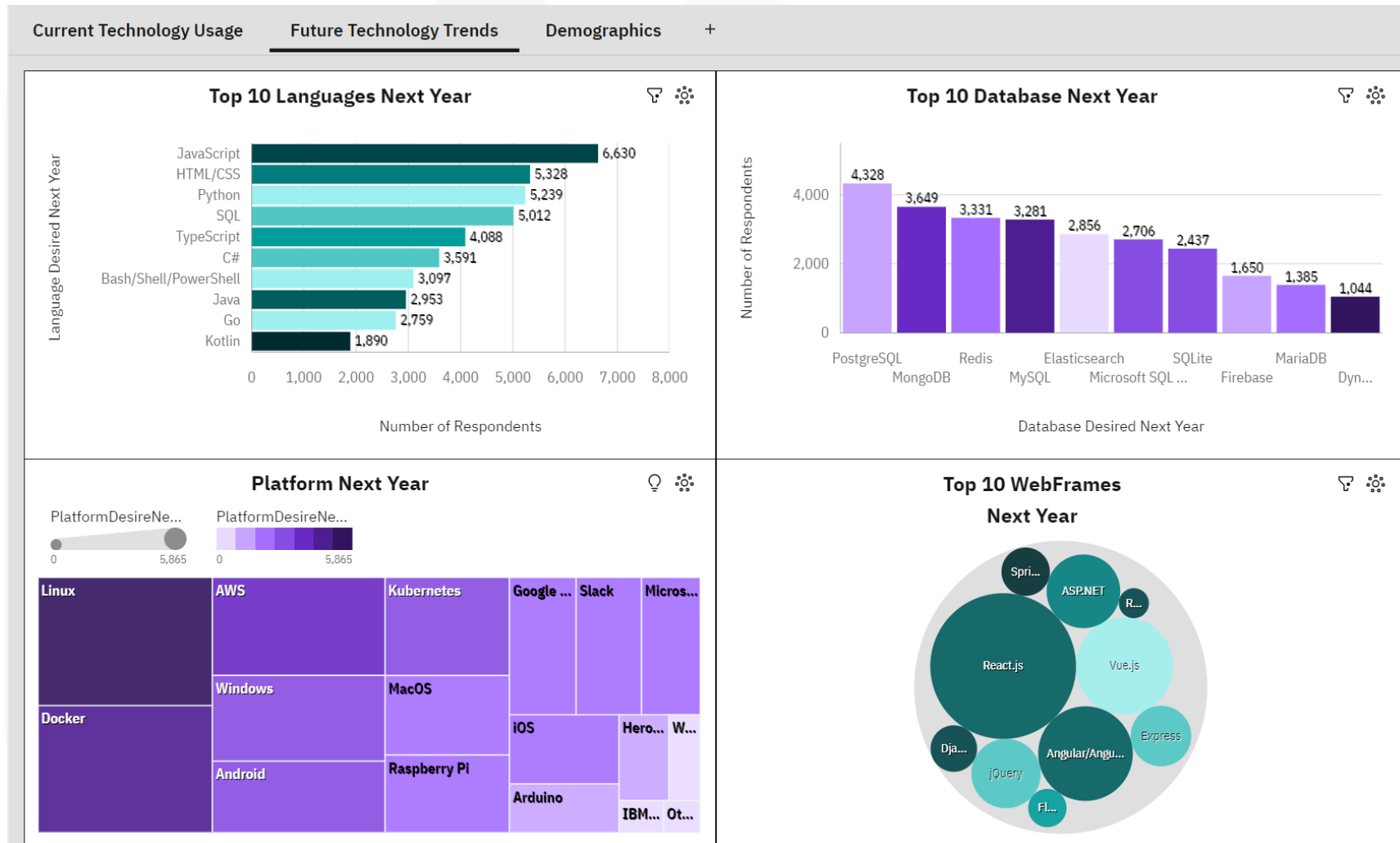


<https://github.com/FloraBurns1/testrepo/blob/main/Technology%20Usage%20and%20Trends.pdf>

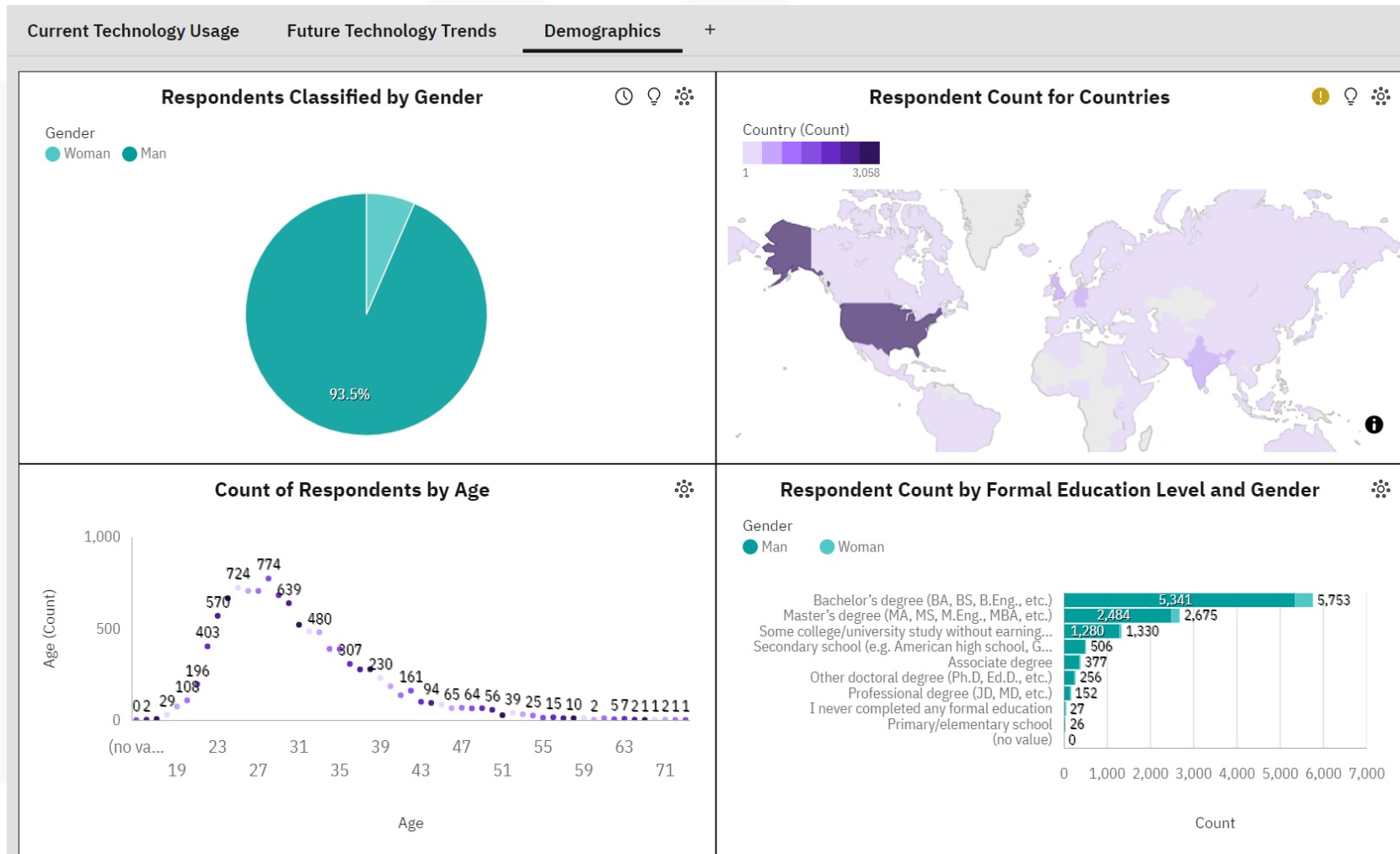
# DASHBOARD TAB 1



# DASHBOARD TAB 2



# DASHBOARD TAB 3



# DISCUSSION - Demographics

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- 93.5 % of respondents are men
- Majority of respondents are between 25 and 34 years old
- Bachelor's Degree and Master's Degree are the top 2 categories for Education level
- Skewed geographic responses from the USA, followed by India.

# OVERALL FINDINGS & IMPLICATIONS

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## Findings

- Top programming languages in demand: JavaScript & HTML/CSS
- Top database skills in demand: My SQL with PostgreSQL and MondoDB gaining top support for next year
- Gender gap favoring men in developed countries

## Implications

- Continued emphasis on web development with companies investing more and enhancing web applications
- Indicates a shift towards modern, flexible database solutions
- Need for initiatives to promote gender diversity to create a more balanced and inclusive workforce



# CONCLUSION

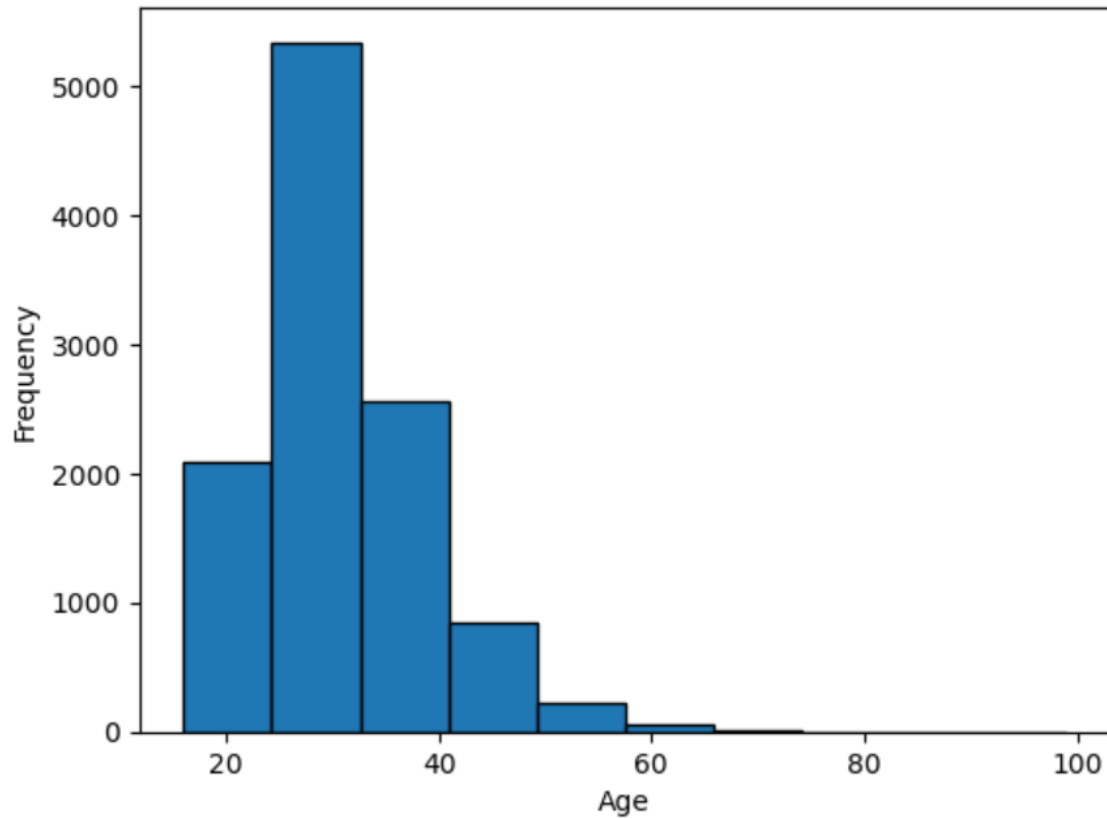
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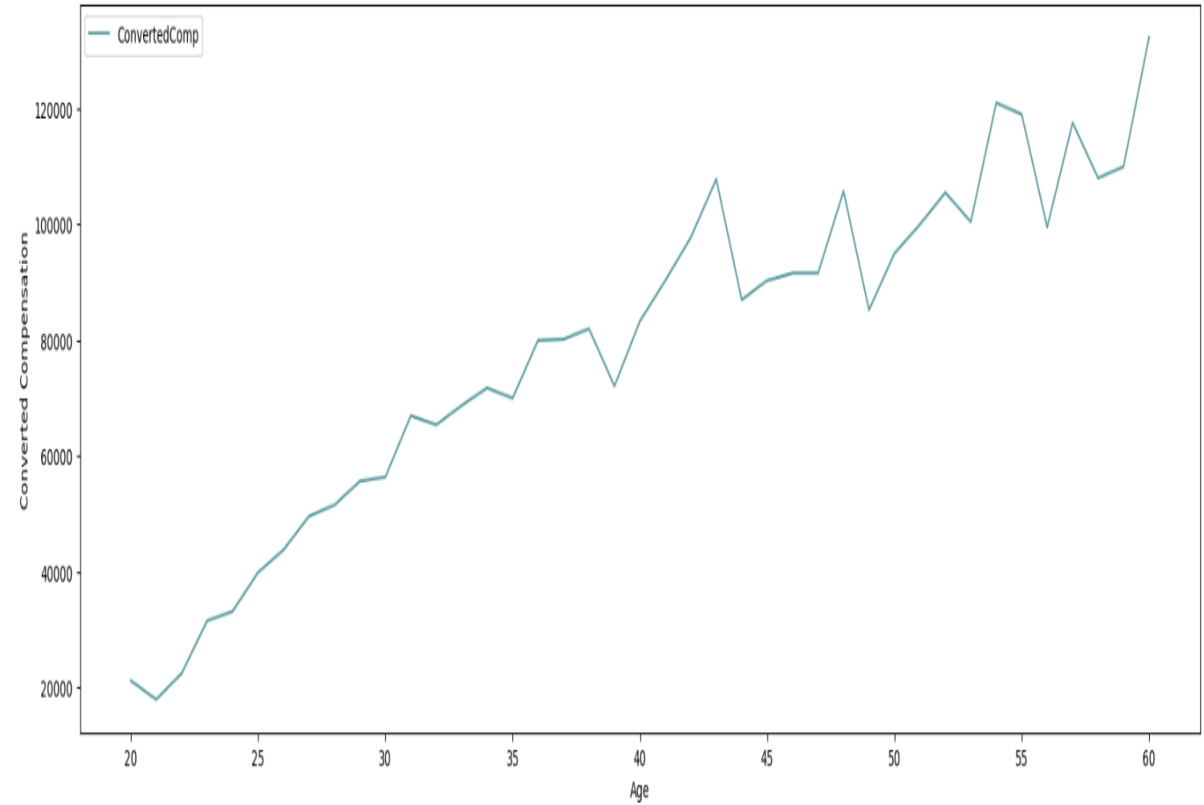
- Identifying the trends for emerging technologies emphasizes the need for continued focus on:
  - Web development
  - Modern database adoption
  - Gender diversity
  - Global representation
- These insights and trends will drive progress and innovation in the tech industry
- Companies can better position themselves for future success and create a more inclusive and dynamic technological landscape

# APPENDIX

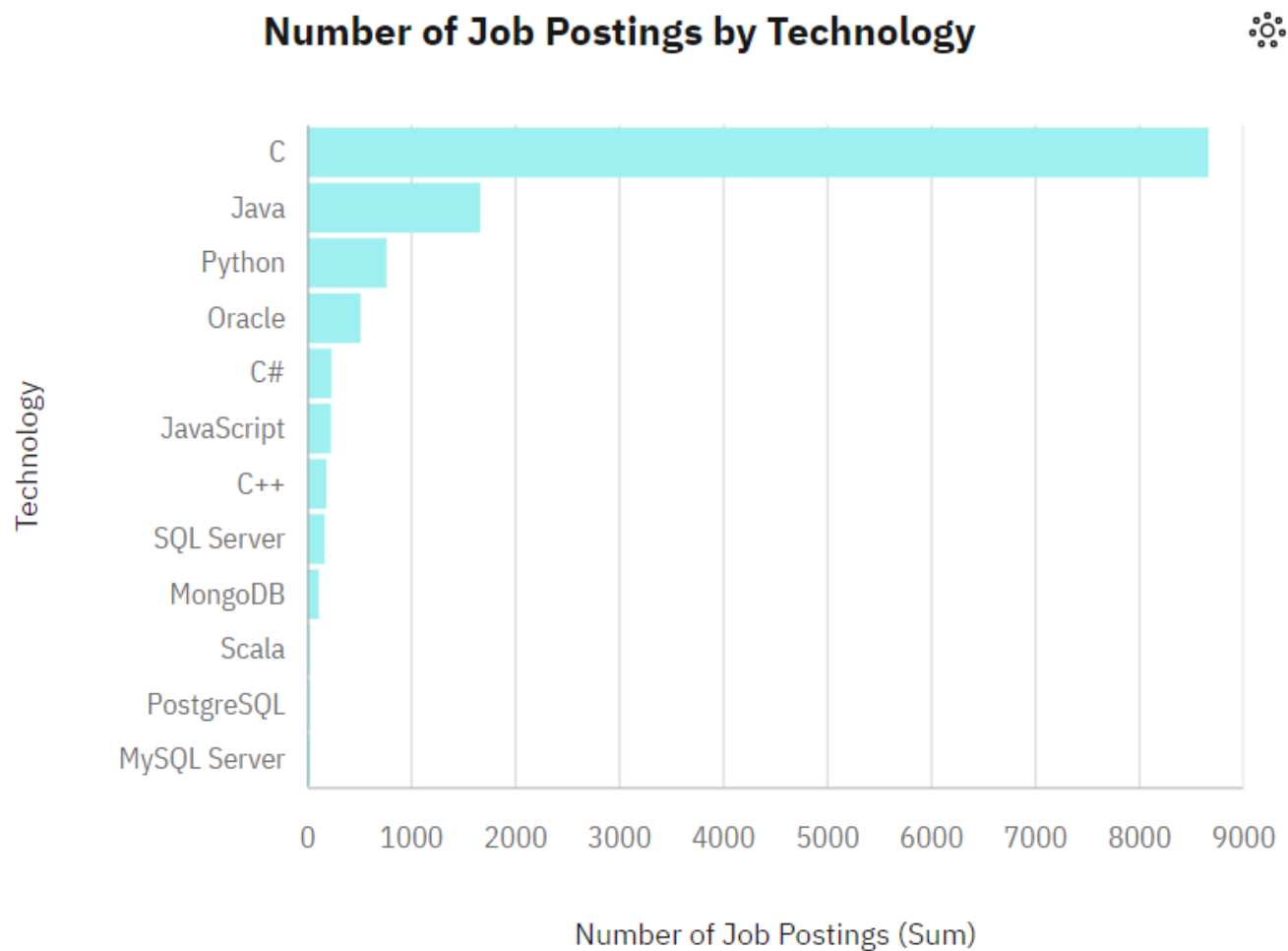
Distribution



Median Converted Compensation for Those Age 20 to 60



# JOB POSTINGS



# POPULAR LANGUAGES

