



TECHNOLOGY SKILLS AND TRENDS ANALYSIS

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OUTLINE



- Executive Summary
- Introduction
- Methodology
- Results
 - Visualization – Charts
 - Dashboard
- Discussion
 - Findings & Implications
- Conclusion
- Appendix

EXECUTIVE SUMMARY



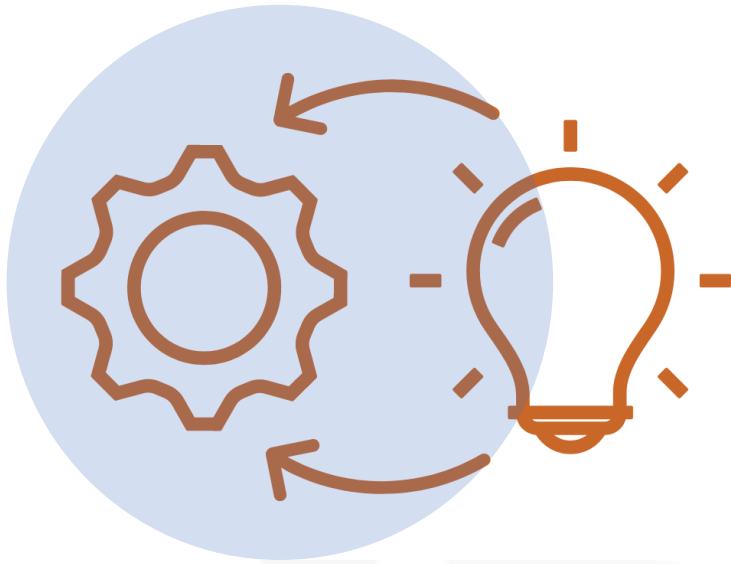
- This presentation examines the current trends in technology jobs, focusing on the most in-demand programming languages, database skills, and web frameworks. Data was collected from various industry sources and analyzed to identify key trends and demographic patterns.
- Data Collection: The project gathers information from multiple datasets.
- Focus Areas: Data is collected on:
 - Top programming languages
 - Top database skills
 - Platforms and web frameworks

EXECUTIVE SUMMARY

- Dashboard: The findings and results are displayed on a dashboard, highlighting:
 - Technology skills
 - Trends
 - Demographics
- Gender Analysis: The project includes an analysis of differences in technology education and experience based on gender. Our analysis also reveals significant gender disparities in technology education and experience, indicating a need for targeted initiatives to promote diversity in the tech industry.

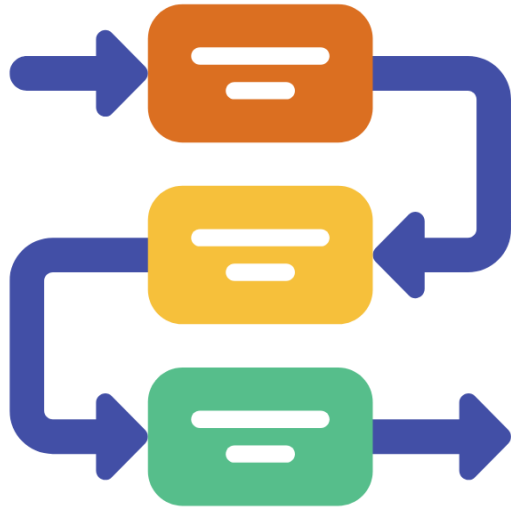


INTRODUCTION



- Findings on the current trends in technology skills based on a comprehensive survey conducted among technology professionals from diverse industries.
- Objective: to identify the most in-demand skills in the tech industry today. By understanding these trends, we aim to provide valuable insights for both aspiring and seasoned tech professionals, as well as organizations looking to stay competitive in a rapidly evolving market.
- Problem:
 - Necessity for training programs to gain new skills and knowledge.

METHODOLOGY



- Data Collection from various Sources
 - Stack Overflow Developer 2019 Survey
 - GitHub Job Postings
 - Programming languages annual salary
- Data Wrangling using Python
- Exploring Data Analysis
- Data visualization
 - Current Technology Usage
 - Future Technology Trend
 - Demographics
 - Presenting Findings
- Data Source:
 - <https://www.kaggle.com/datasets/promptcloud/jobs-on-naukricom>
 - <https://stackoverflow.blog/2019/04/09/the-2019-stack-overflow-developer-survey-results-are-in/>

RESULTS

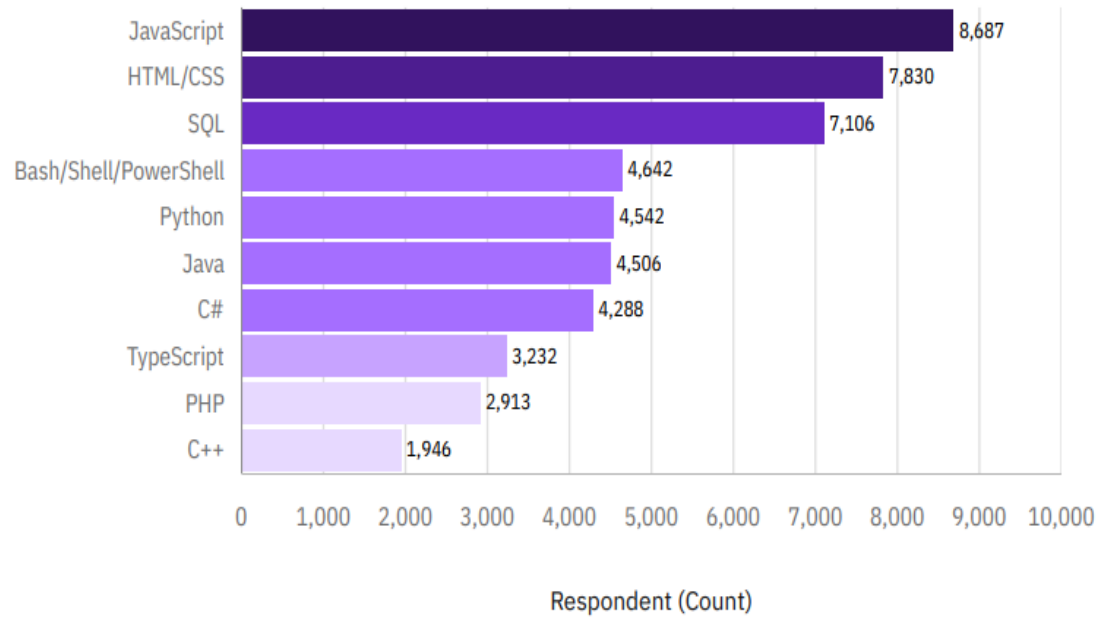
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Cassandra	Cassandra	AWS	AWS	ASP.NET	Angular/Angu...	18,754	
		Summary					18,754
		Android	Android	Angular/Angu...	Angular/Angu...	28,626	
		Summary					28,626
		Docker	Docker	jQuery	(no value)	1,641	
		Summary					1,641
	Summary					49,021	
	Elasticsearch	Android	AWS	Drupal	Angular/Angu...	15,921	
		Summary					15,921
		Arduino	Arduino	Django	Django	20,197	
		Summary					20,197

PROGRAMMING LANGUAGE TRENDS

Current Year

Top 10 Languages Worked With

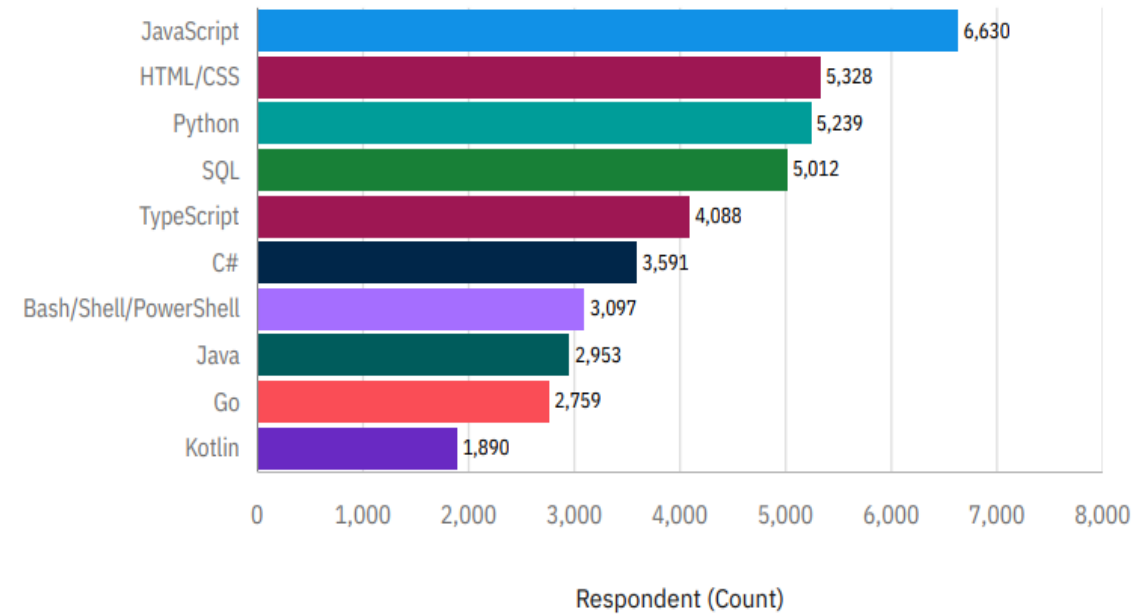
LanguageWorkedWith



Next Year

Top 10 Languages Desired Next Year

LanguageDesireNextYear



PROGRAMMING LANGUAGE TRENDS - FINDINGS

- JavaScript is the most worked with and also the most desired language, indicating its crucial role in modern web development and its continued relevance in the future.
- Both HTML/CSS and SQL are consistently high on both lists, reflecting their fundamental roles in web development and data management, respectively.
- Python shows a strong presence in both categories, with a notable increase in desire for learning, highlighting its growing popularity for data science, machine learning, and general-purpose programming.
- Emerging Technologies: The presence of Go and Kotlin in the desired languages list suggests an increasing interest in modern, efficient, and scalable programming languages.

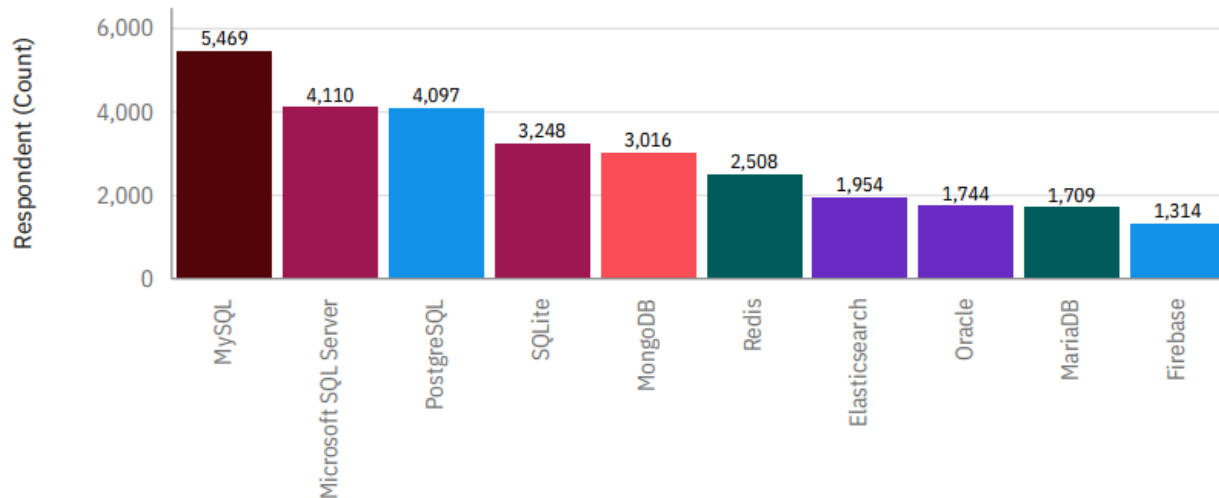
PROGRAMMING LANGUAGE TRENDS - IMPLICATIONS

- **Educational Focus:** Training programs and educational institutions should emphasize JavaScript, Python, and TypeScript due to their high demand in the industry. Finding 3
- **Career Development:** Professionals looking to stay relevant or advance in their careers should consider gaining proficiency in these high-demand languages.
- **Tool and Framework Development:** Companies developing programming tools and frameworks should ensure strong support for JavaScript, Python, and SQL to cater to the large user base.

DATABASE TRENDS

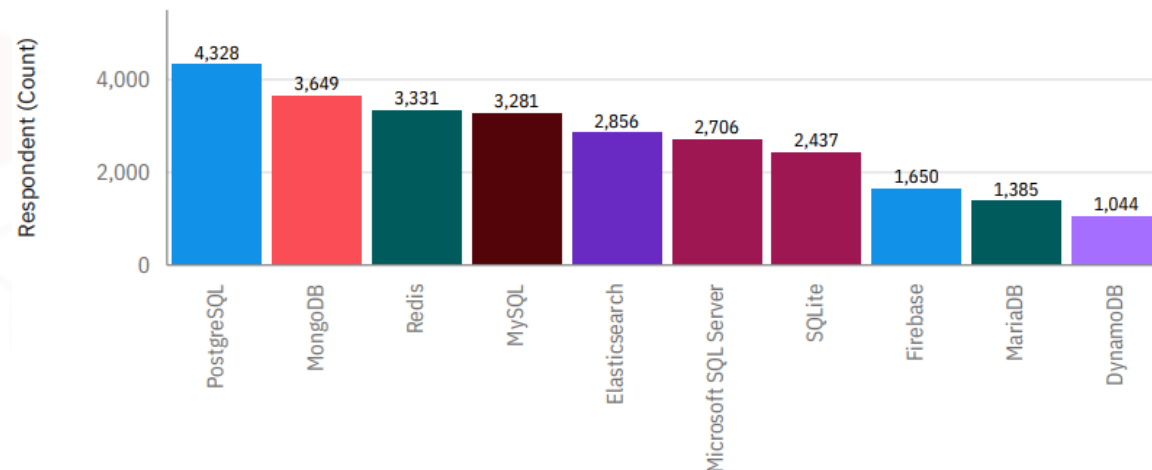
Current Year

Top 10 Databases Worked With



Next Year

Top 10 Databases Desired Next Year



DATABASE TRENDS - FINDINGS

- **MySQL:** The most commonly used database, indicating its widespread adoption for various applications, particularly web development.
- **Microsoft SQL Server:** While still heavily used, there's relatively less interest in future use compared to PostgreSQL and MongoDB, possibly due to licensing costs and the shift towards open-source alternatives.
- **Microsoft SQL Server and PostgreSQL:** Also show high usage, reflecting their importance in enterprise and open-source communities respectively.
- **PostgreSQL:** Tops the list of desired databases, suggesting a growing preference for its advanced features, robustness, and open-source nature.

DATABASE TRENDS - IMPLICATIONS

- Training programs should emphasize PostgreSQL and MongoDB to meet the increasing demand.
- Enhanced integration with Redis and Elasticsearch can provide additional value for performance and analytics.
- Companies and developers should consider focusing on PostgreSQL and MongoDB for new projects, given their growing popularity and advanced features.

DASHBOARD

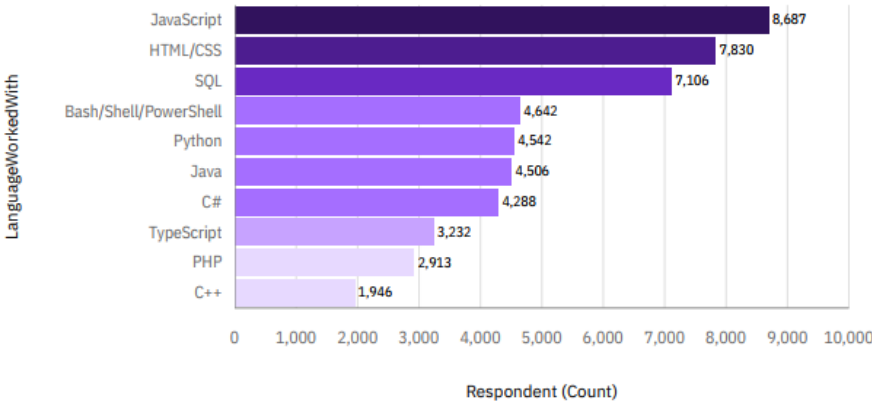


[For a comprehensive analysis and detailed charts, please refer to the full dashboard](#)

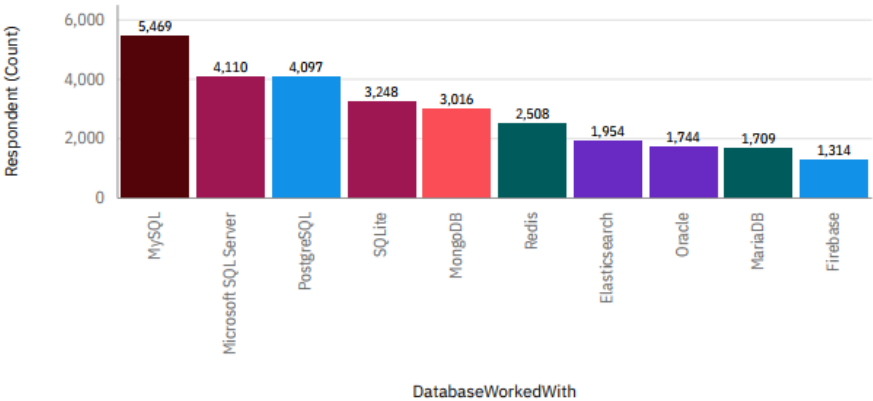
DASHBOARD TAB 1

Current Technology Usage

Top 10 Languages Worked With



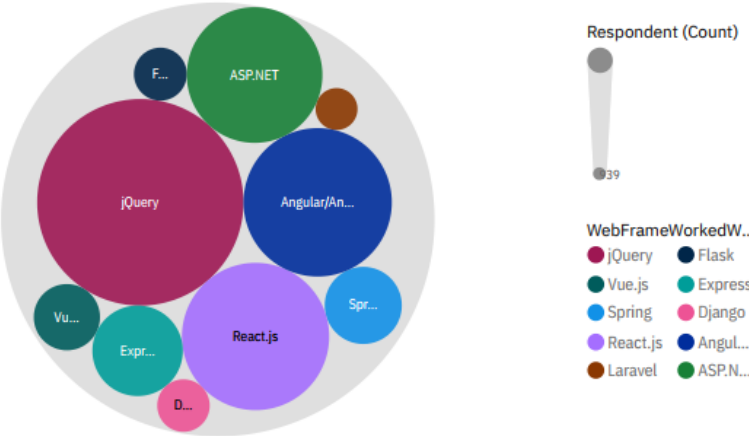
Top 10 Databases Worked With



Platforms Worked With



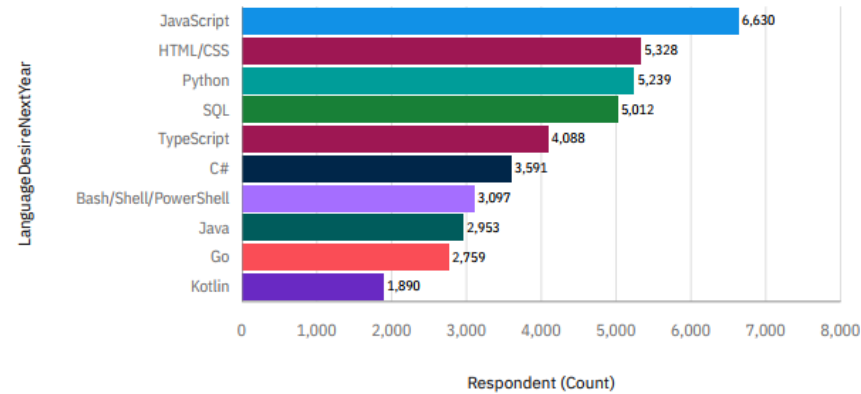
Top 10 WebFrame Worked With



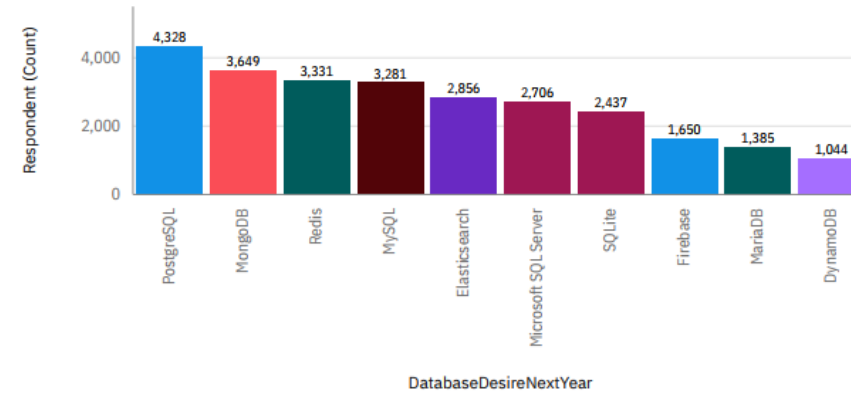
DASHBOARD TAB 2

Future Technology Trend

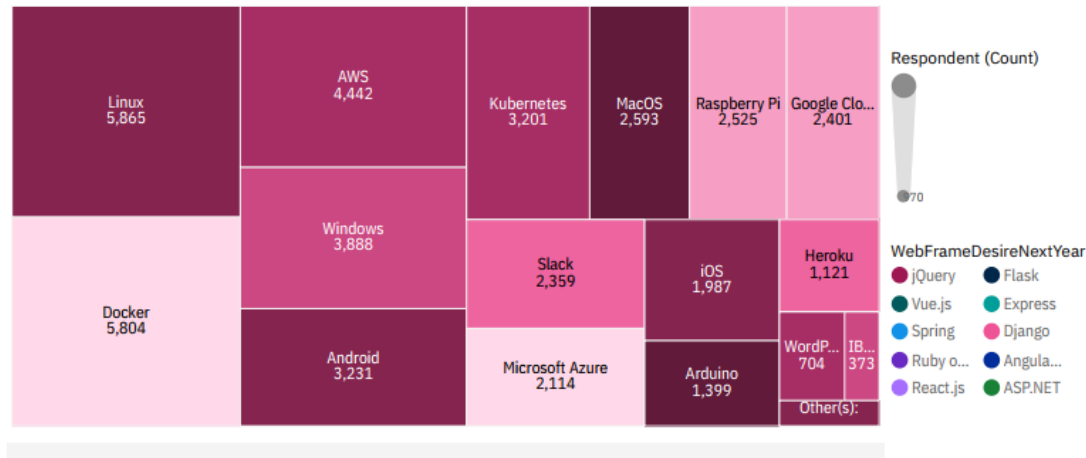
Top 10 Languages Desired Next Year



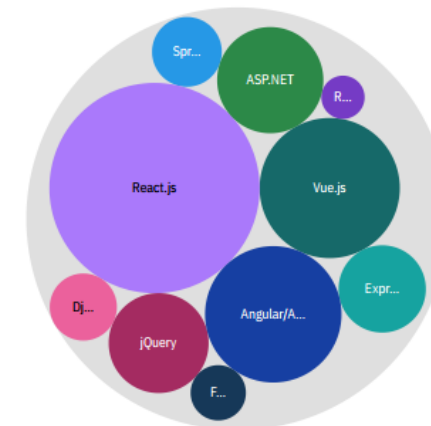
Top 10 Databases Desired Next Year



Tree Map of Platform Desired Next Year



Top 10 WebFrame Desired Next Year

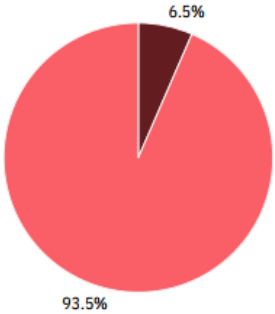


DASHBOARD TAB 3

Demographics

Respondent classified by Gender

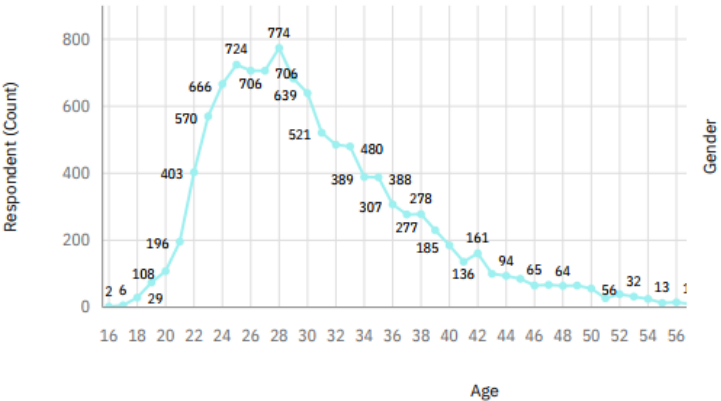
Gender
● Wo... 731 ● Man 10,480



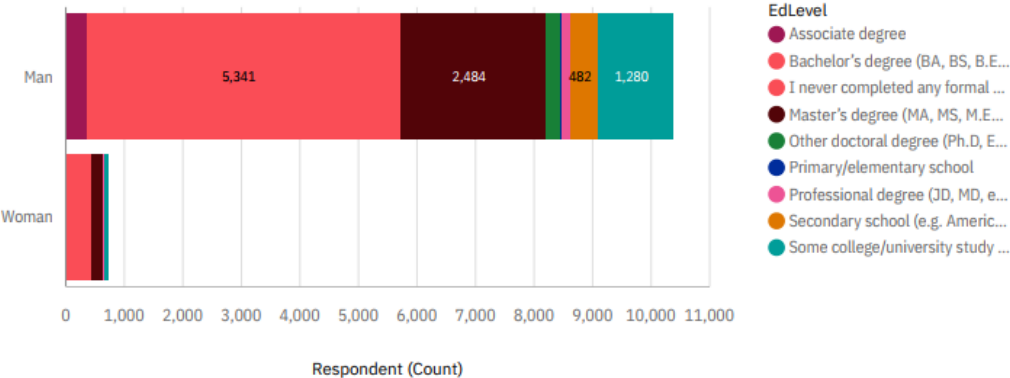
Number of Respondents by Country



Number of Respondents by Age



Respondent Count by Gender, classified by Formal Education Level



DISCUSSION



- The provided data reveals significant trends and preferences in the technology sector. The bar charts illustrate the popularity and future interest in various programming languages and databases among professionals.
- Understanding these trends is essential for developers, businesses, and educators to align their strategies with industry demands.

OVERALL FINDINGS

- JavaScript, HTML/CSS, and SQL lead in usage.
- JavaScript remains top, with growing interest in Python and TypeScript.
- MySQL, Microsoft SQL Server, and PostgreSQL are widely used
- PostgreSQL is the most desired, followed by MongoDB and Redis.
- The majority of respondents are between 25-34 years old, indicating a relatively young workforce.
- There is a significant gender imbalance, with a higher number of male respondents compared to female and non-binary individuals. This reflects ongoing gender disparities in the technology sector.

OVERALL IMPLICATIONS

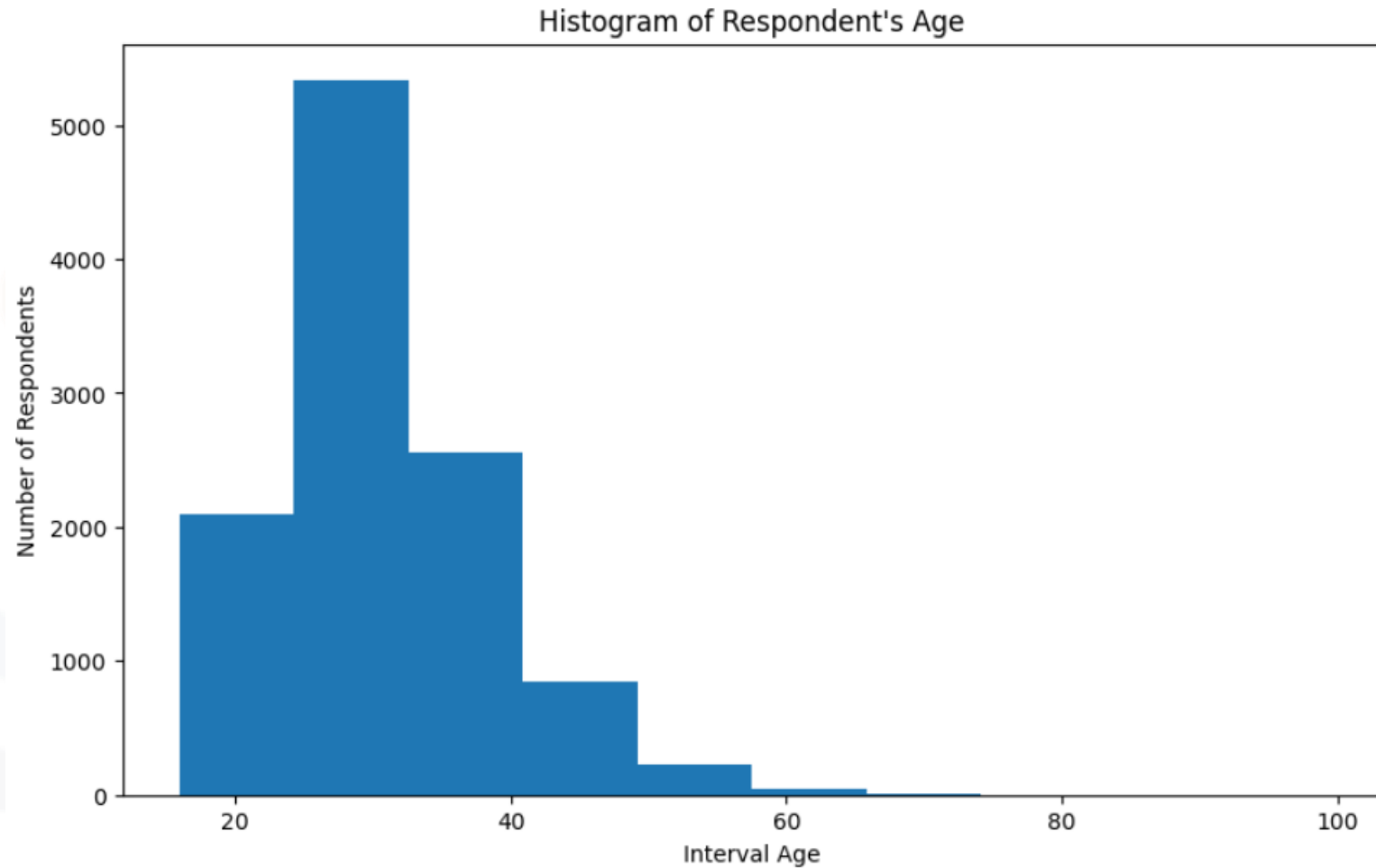
- Businesses should invest in these languages for current and future projects, and training programs should focus on them to meet market demand.
- **Future-Proofing:** Stay informed about emerging trends and be ready to adapt to the evolving technological landscape.
- Organizations may consider transitioning to or incorporating PostgreSQL and MongoDB to leverage their advanced features and scalability.
- **Skill Development:** Emphasize training in the most popular and desired technologies to build a robust workforce.

CONCLUSION

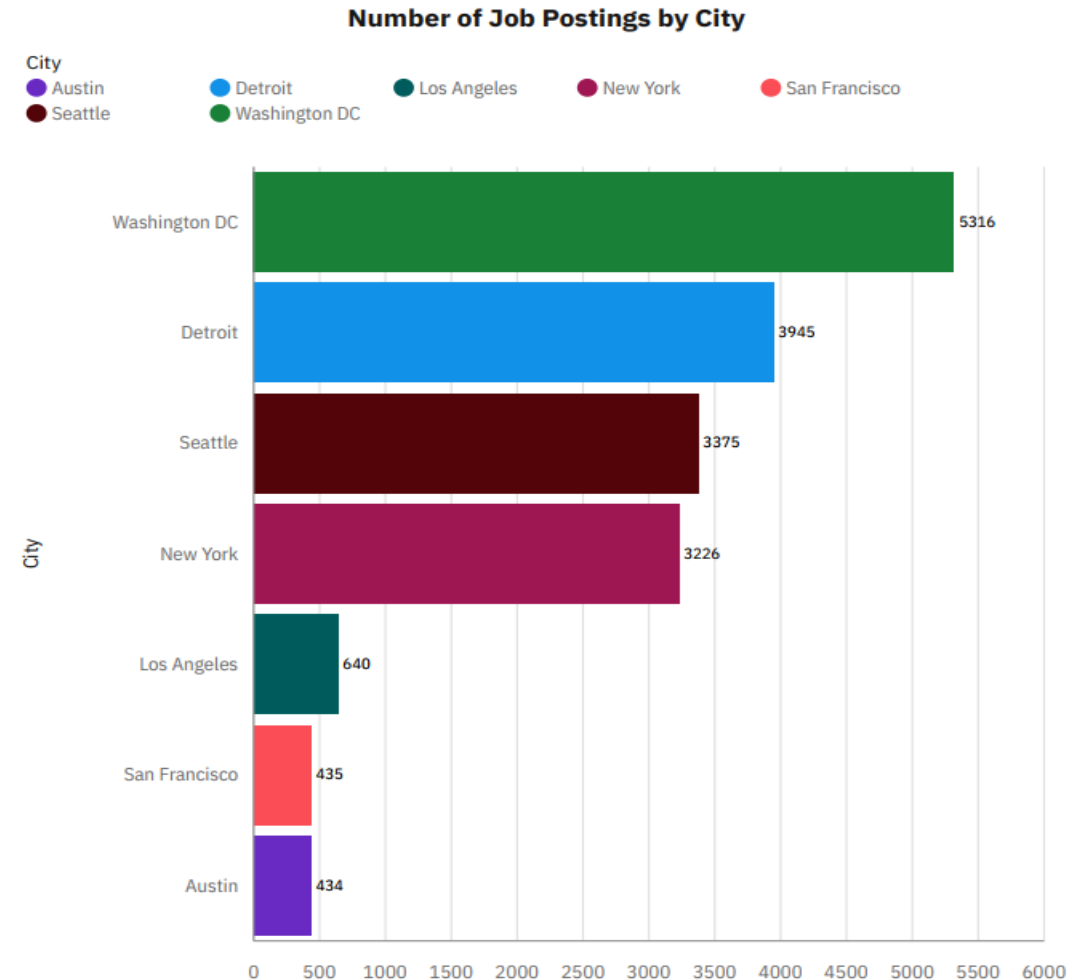


- The data highlights JavaScript's continued dominance.
- Growing interest in Python and TypeScript.
- For databases, PostgreSQL is emerging as a preferred choice for future projects.
- The demographic analysis reveals critical insights into the composition and educational background of technology professionals, which can inform strategies for workforce development, diversity initiatives, and educational collaborations to foster a more balanced and skilled technology sector.

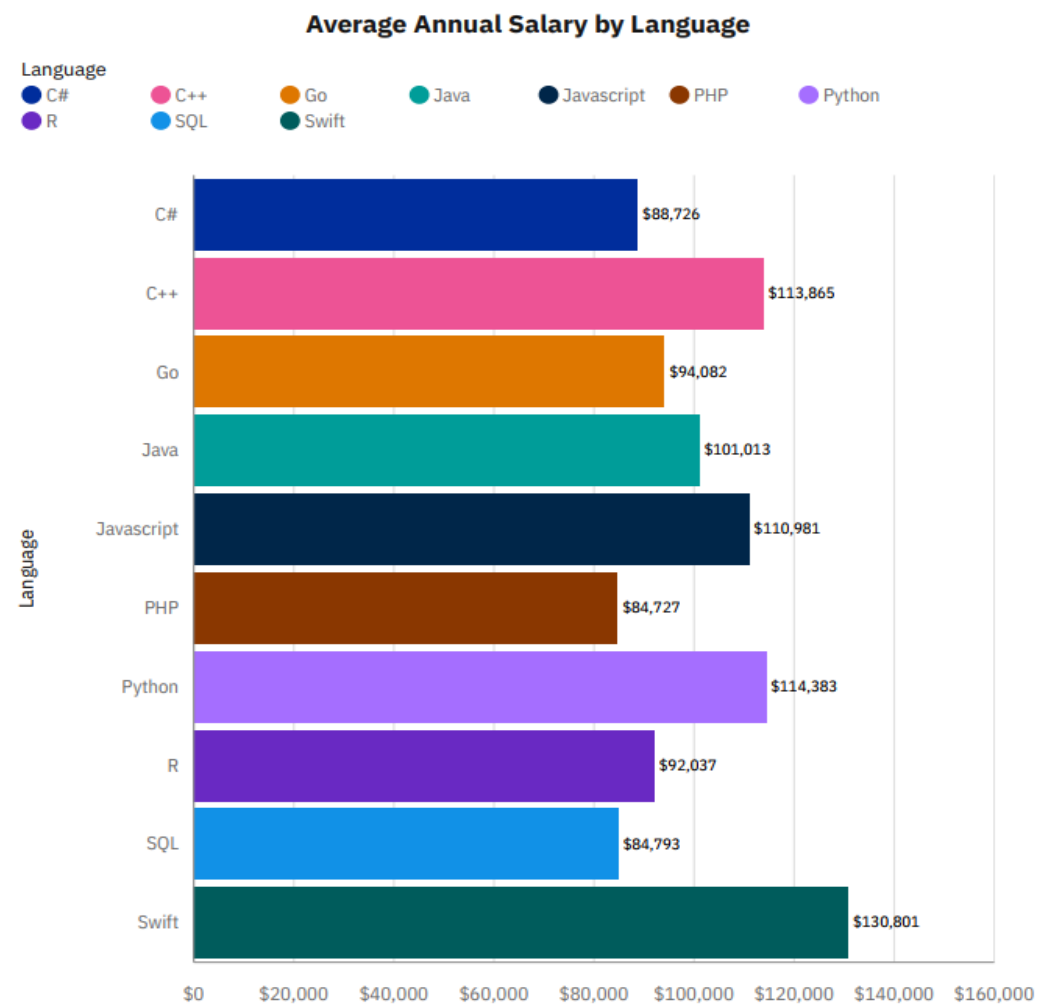
APPENDIX



JOB POSTINGS



POPULAR LANGUAGES



MEDIAN CONVERTED COMPENSATION FOR AGES 25 -60

