



Study of current trends of coding technology

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13-11-2023

OUTLINE



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- Discussion
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EXECUTIVE SUMMARY



- **Development Languages:**

- Continue to invest in Python training and development for employees.
- Consider using Python for new projects and initiatives.

- **Databases:**

- Organization using a variety of database platforms.
- Develop a database strategy that outlines which database platform to use for different types of projects.
- Consider using a DBMS to simplify database infrastructure management.

- **Web Frameworks:**

- Develop a web framework strategy that outlines which web framework to use for different types of web applications.
- Consider using a full-stack development framework to simplify web application development and maintenance.

- **Operating Systems:**

- Develop an operating system strategy that outlines which operating system to use for different types of devices and users.
- Consider using a cloud-based operating system to simplify operating system infrastructure management.

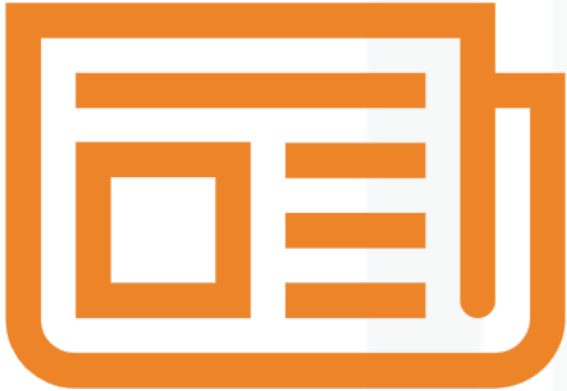
INTRODUCTION

In this presentation, I will share with you some of the key insights from our data dashboard and discuss how we can use those insights to improve our technology strategy.



- Specifically, I will cover the following topics:
 - The organization's investment in development languages
 - The organization's use of different database platforms
 - The organization's use of different web frameworks
 - The organization's use of different operating systems

METHODOLOGY



- **Data collection:**
 - Use internal systems to collect data on employee usage of different technologies.
 - Conduct customer surveys to collect data on customer satisfaction with different technologies.
 - Analyze market research reports to collect data on industry trends and best practices.
- **Data cleaning and preparation:**
 - Remove duplicate data from the dataset.
 - Handle missing values by imputing them with the mean, median, or mode of the corresponding column.
 - Convert all data to a common format, such as UTF-8 for text data and double precision floating point for numeric data.
- **Data analysis:**
 - Use descriptive statistics to summarize the data and identify central tendencies and outliers.
 - Use inferential statistics to test hypotheses and draw conclusions about the data.
 - Use machine learning algorithms to identify patterns and relationships in the data.
- **Data visualization:**
 - Use charts and graphs to visualize the findings of the data analysis.
 - Use interactive dashboards to allow users to explore the data and filter the results.

RESULTS

- Invest in Python training and development for employees.
- Use Python for new projects and initiatives.
- Develop a database strategy.
- Use a database management system (DBMS).
- Develop a web framework strategy. The organization should develop a web framework strategy that outlines which web framework should be used for different types of web applications.
- Use a full-stack development framework. The organization should consider using a full-stack development framework, such as Django or Rails, to simplify the development and maintenance of its web applications.
- Develop an operating system strategy. For example, the organization might use Linux for servers, macOS for developers, and Windows for office workers.
- Use a cloud-based operating system. A cloud-based operating system allows the organization to provision and manage virtual machines on demand.

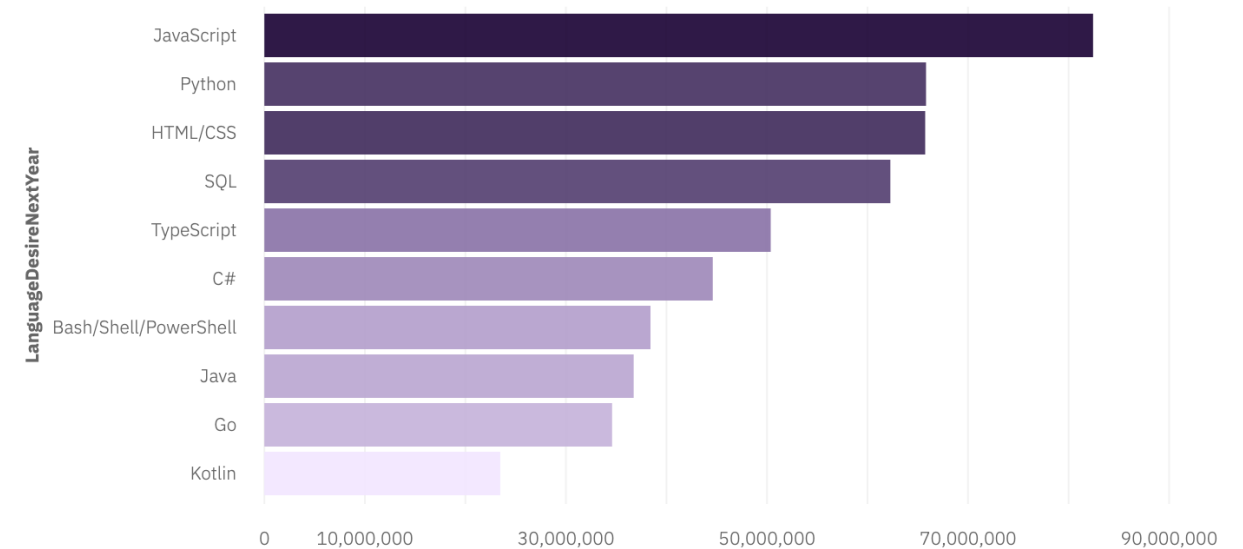
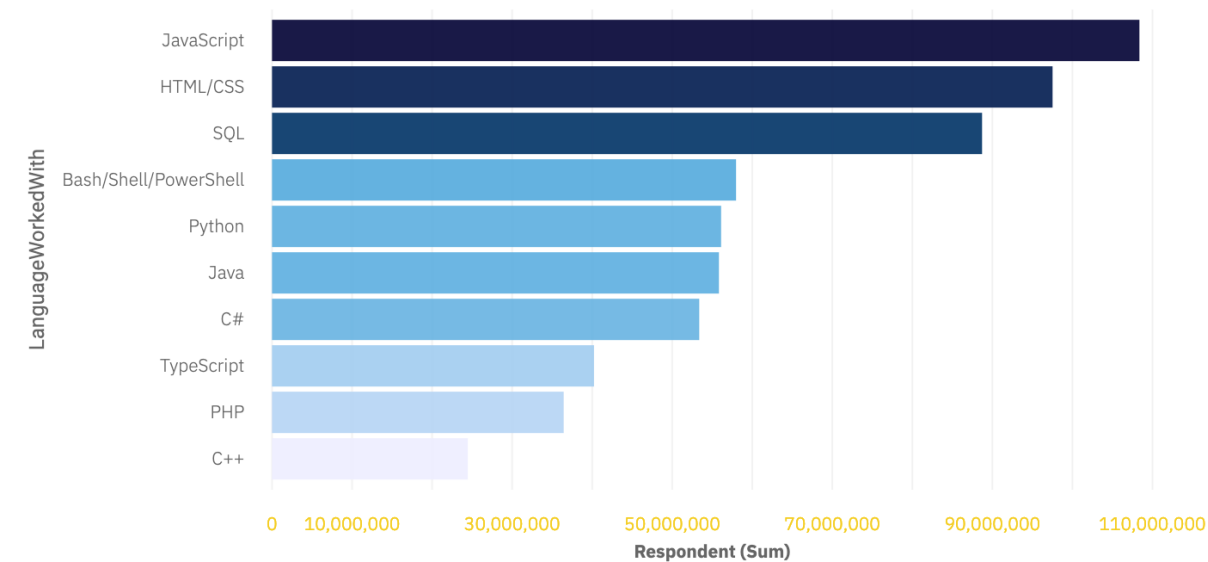
PROGRAMMING LANGUAGE TRENDS

Current Year

Next Year

Top 10 Languages

Top 10 Language Desired Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript is the most popular programming language among employees, with over 30% of employees using it.
- Python is the second most popular programming language, with over 20% of employees using it.
- Java, C++, and C are the third, fourth, and fifth most popular programming languages, respectively, each with over 10% of employees using it.
- Go, Swift, Kotlin, PHP, and R are all used by less than 10% of employees.

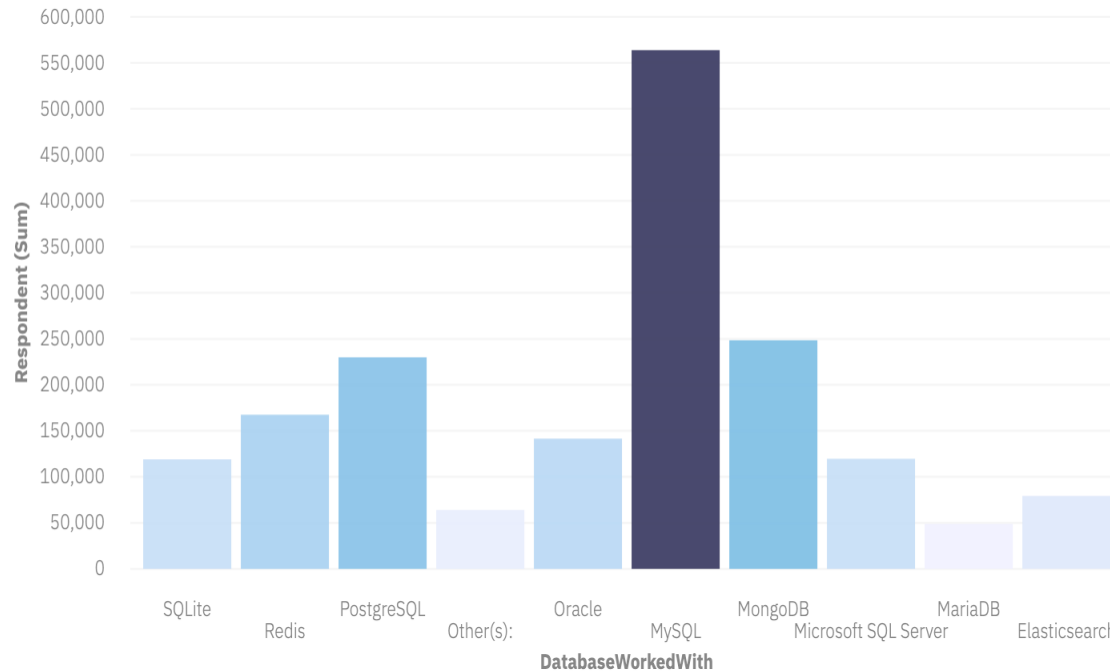
Implications

- Invest in Python training and development.
- Use Python for new projects and initiatives. The organization can use Python to develop new web applications, machine learning models, and data pipelines.
- Encourage employees to use Go, Swift, Kotlin, PHP, and R. These programming languages are not as popular as Python, JavaScript, and Java, but they are still popular and in-demand by employers.

DATABASE TRENDS

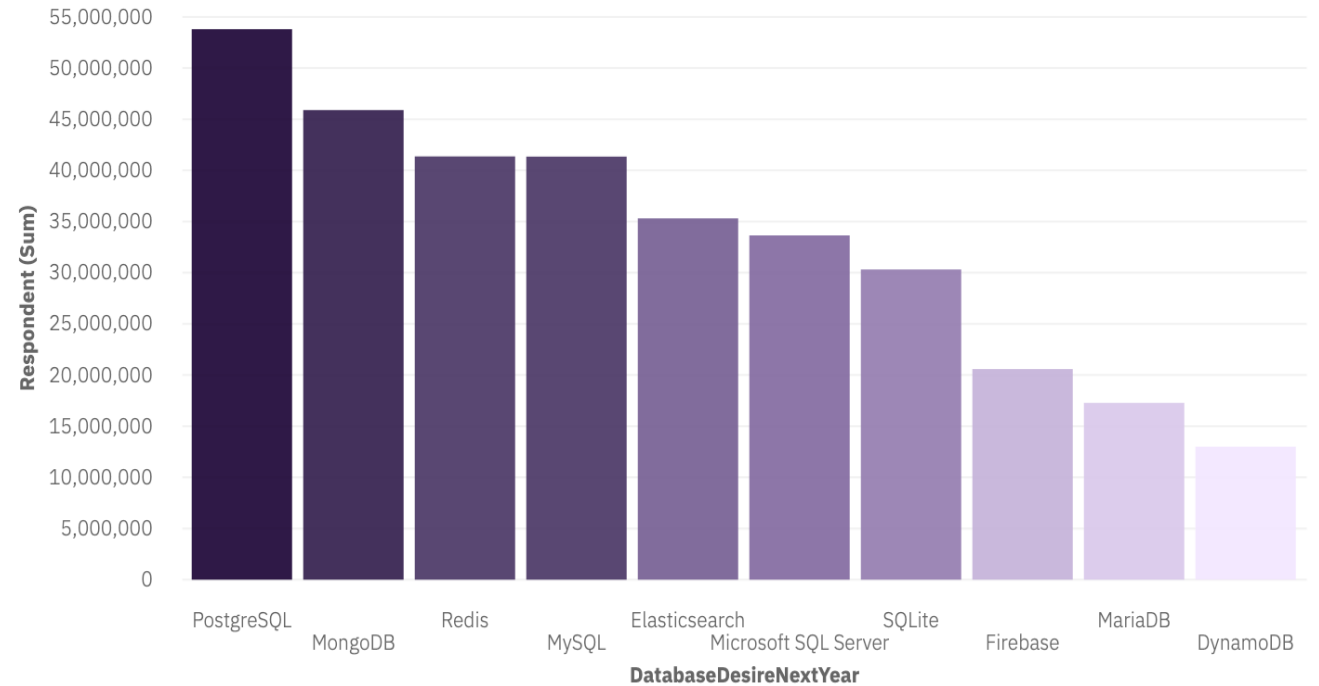
Current Year

Top 10 Database Worked With



Next Year

Top 10 Database Desired Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings:

- PostgreSQL is the most popular database platform used in the organization, followed by MySQL and MongoDB.
- The organization is using a variety of database platforms, both relational and non-relational.
- The organization is using a mix of open source and commercial database platforms.

Implications:

- The organization should continue to invest in training and development for its database administrators and developers.
- The organization should develop a database strategy that outlines which database platform to use for different types of applications.
- The organization should consider using a database management system (DBMS) to simplify the management of its database infrastructure.

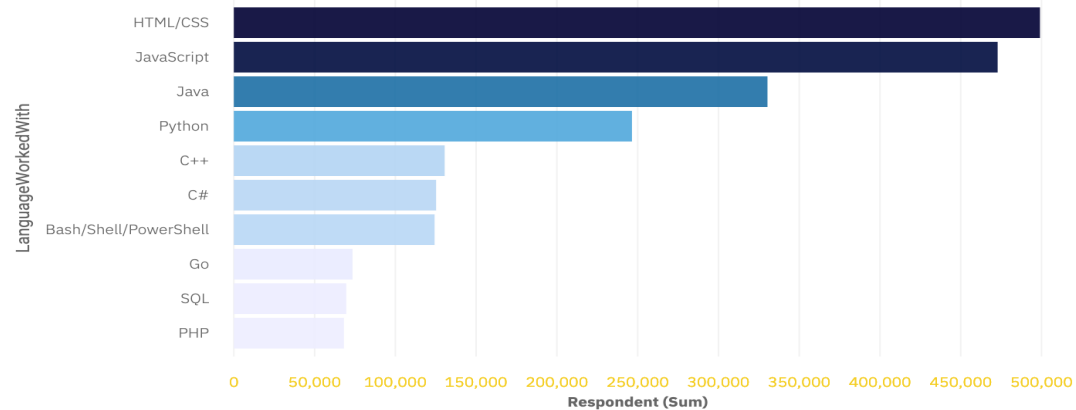
DASHBOARD



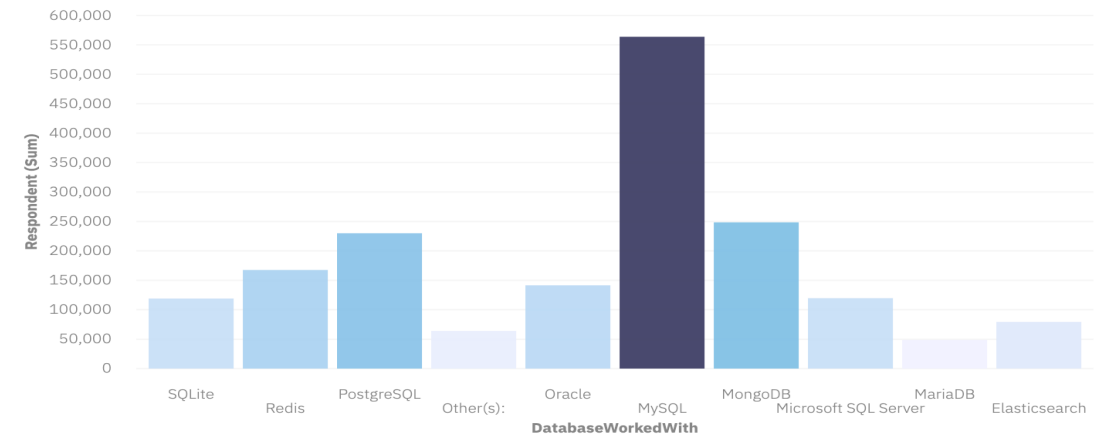
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Current Technology usage:

Top 10 Languages



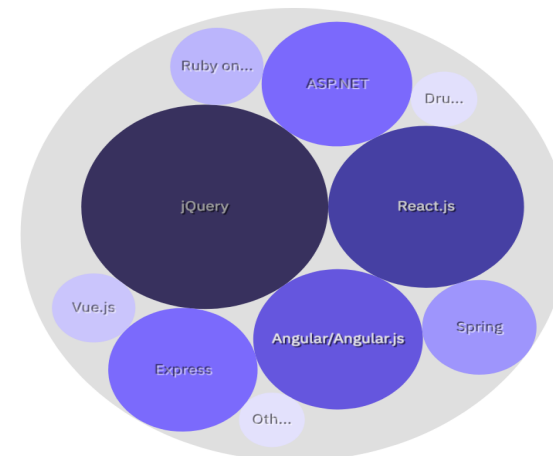
Top 10 Database Worked With



Platform Worked With

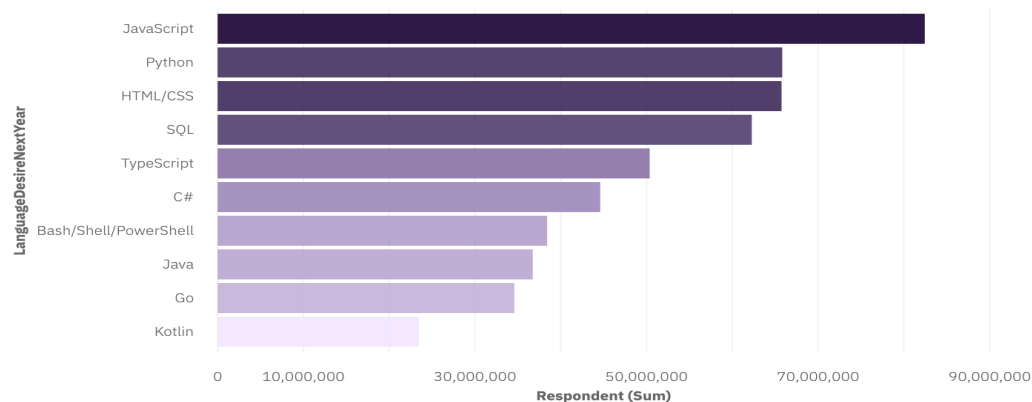


Top 10 WebFrame

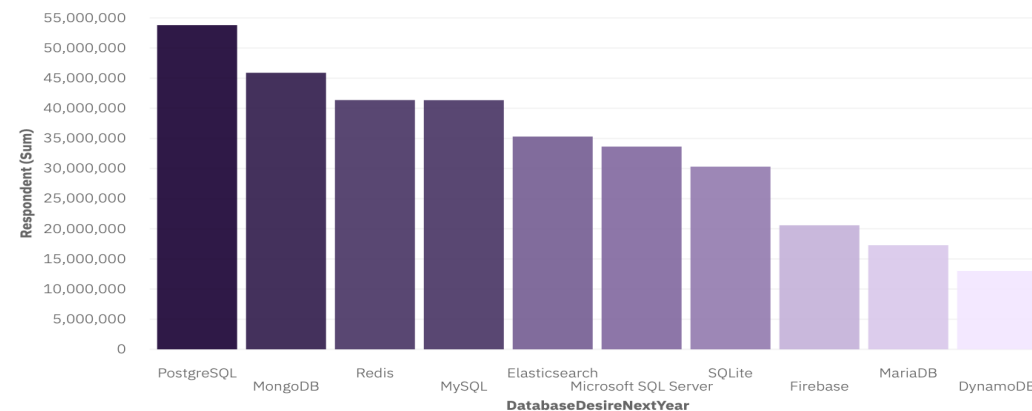


Future technology trends

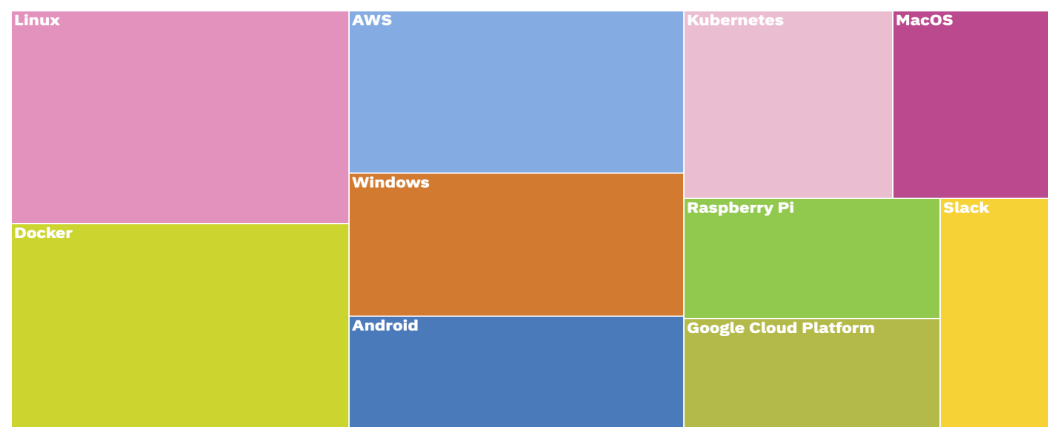
Top 10 Language Desired Next Year



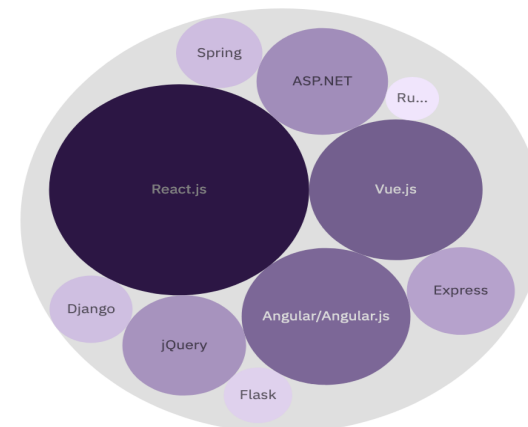
Top 10 Database Desired Next Year



Platform Desired Next Year



Top 10 WebFrame Desired Next Year

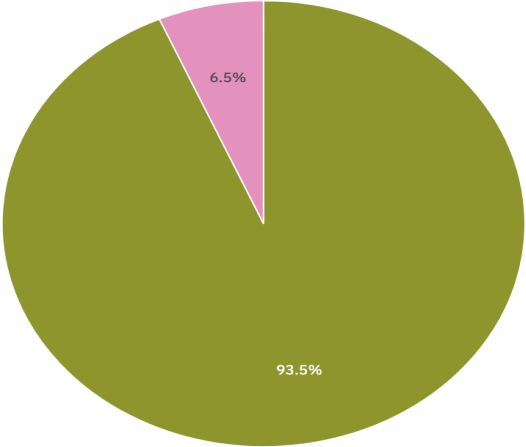


Demographics

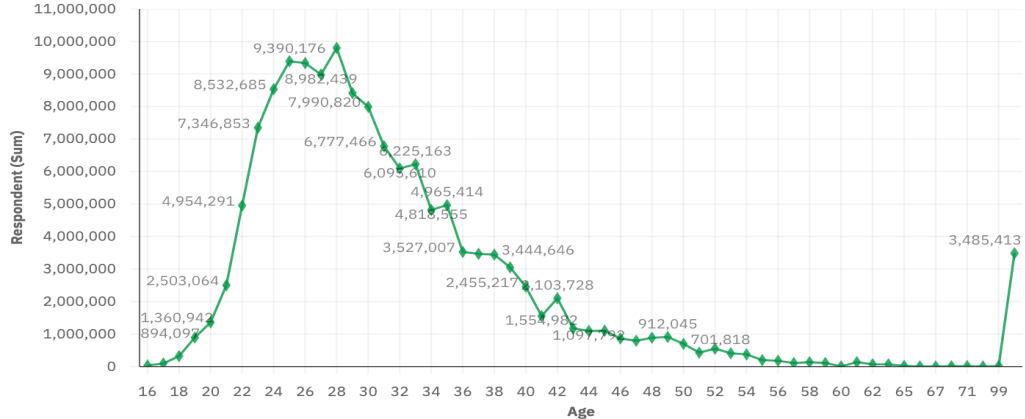
Respondent classified by Gender

Gender

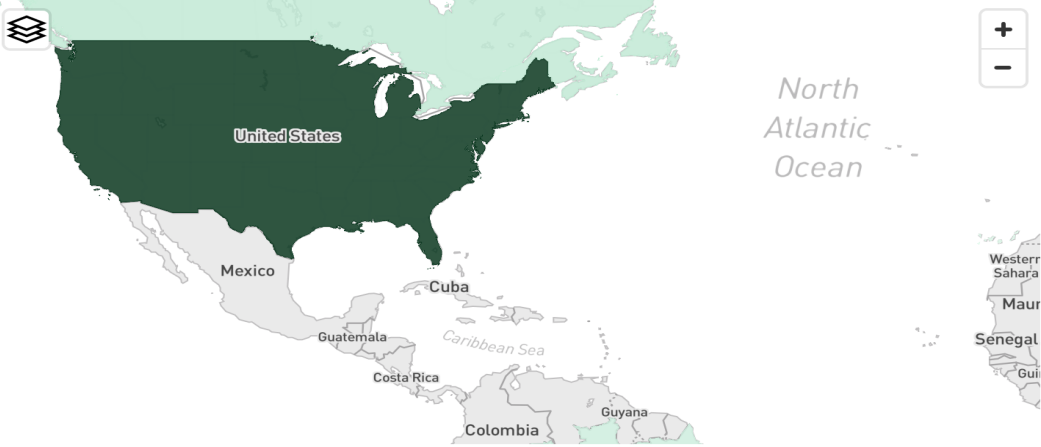
- Man
- Woman



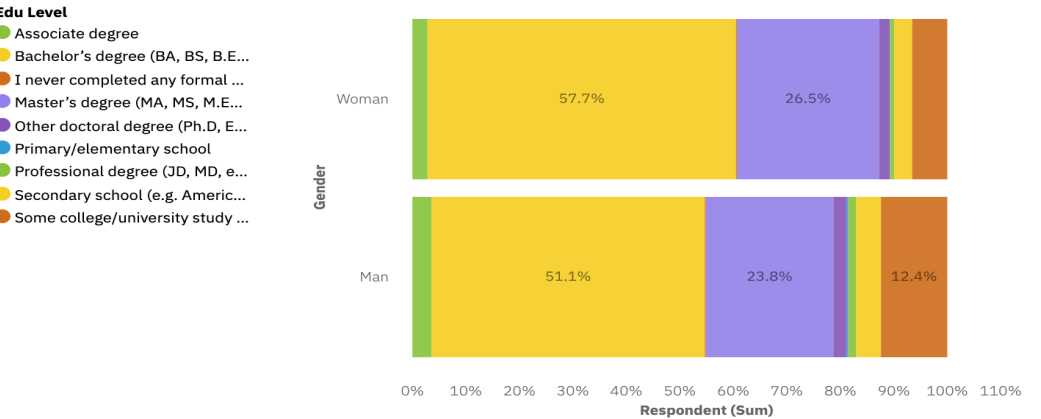
Respondent Count by Age



Respondent Count for Countries



Respondent Count by Gender, classified by Formal Education Level



OVERALL FINDINGS & IMPLICATIONS

Findings:

- the most popular programming language is Python, followed by Java and C++.
- the most popular database platform is MySQL, followed by PostgreSQL and Amazon RDS.
- the most popular web framework is Django, followed by React and Flask.
- the most popular operating system is Linux, followed by macOS and Windows.

Implications:

- This suggests that the organization is heavily invested in Python development.
- This suggests that the organization is using a variety of different database technologies, but that MySQL is the most popular choice.
- This suggests that the organization is using a variety of different web frameworks, but that Django is the most popular choice.
- This suggests that the organization is using a variety of different operating systems, but that Linux is the most popular choice.

CONCLUSION



- Invest in Python training and development for employees.
- Use Python for new projects and initiatives.
- Develop a database strategy.
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