TRENDING TECHNOLOGIES: STACK OVERFLOW DEVELOPER SURVEY,2019

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Classification: General

OUTLINE

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

- Top programming languages in demand:
  - **JavaScript, HTML/CSS, SQL, Bash/Shell/PowerShell, Python**
- Top database skills in demand:
  - **Mysql, Microsoft SQL Server, Postgresql, SQLite, MongoDB**
- Popular platforms:
  - **Windows, Linux, Docker, AWS, Slack**
- Popular Web Frames:
  - **jQuery, Angular/Angular.js, React.js, ASP.NET, Express**
- Future Technology Trend:
  - **Python** takes the third row, followed by **SQL** and **TypeScript**
- **Redis** and **Elasticsearch** also place in Top 5
- **Android** is in the Top 5 demanded platforms, the rest remains
- **React.js** takes the first row and **Vue.js** is the latest addition as the last

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INTRODUCTION

- Veral significant have surfaced in programming and technology in recent years.
- These insights shed light on the evolving landscape of programming languages, web frameworks, and the demographics of professional developers.
- Stack Overflow conducts an inclusive survey of individuals engaged in coding globally.
- Covering a wide array of topics from preferred technologies to career aspirations, 2019 marks the 9th consecutive year of survey publication.
- Nearly 90,000 developers participated in the 20-minute survey in 2019 Survey.

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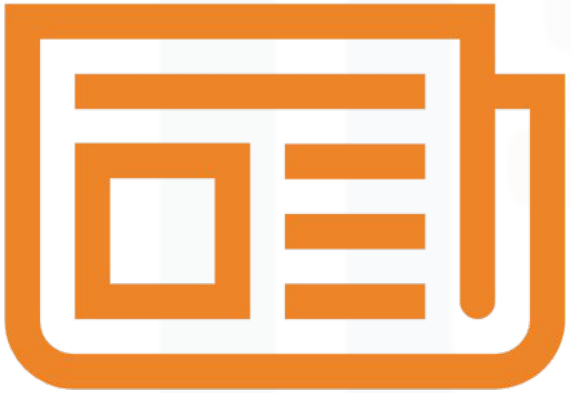
METHODOLOGY



- Data is based on the survey conducted by Stack Overflow from January 23 to February 14 and involved 88,883 software developers from 179 countries.
- Familiarization with this dataset was achieved through completing IBM labs on Coursera, which encompassed topics such as Web Scraping, Dataset Exploration, Data Wrangling, Exploratory Data Analysis, and Data Visualization.
- Data analysis and visualization was conducted vi IBM Cognos Analytics.

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RESULTS

- In language programming Python overtakes Java, becoming the 5th most preferred

language with significant growth.
It stands as the fastest growing major programming language.
• JavaScript remains the most used programming language.
• jQuery is the most widely used among web frameworks, with React.js surpassing Angular in developer usage this year.
• Globally, men represent approximately 90% of respondents, with higher female representation among students than professional developers in regions like the US, India, and the UK.
• Around 3/4 of professional developers globally hold at leasta bachelor's degree, aligning with past findings.

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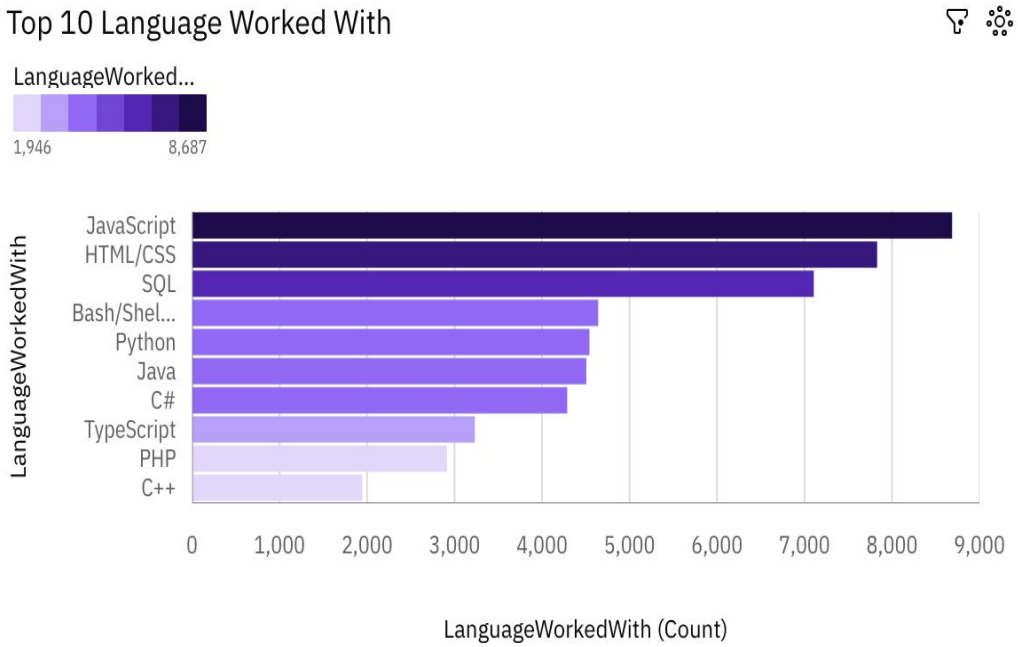
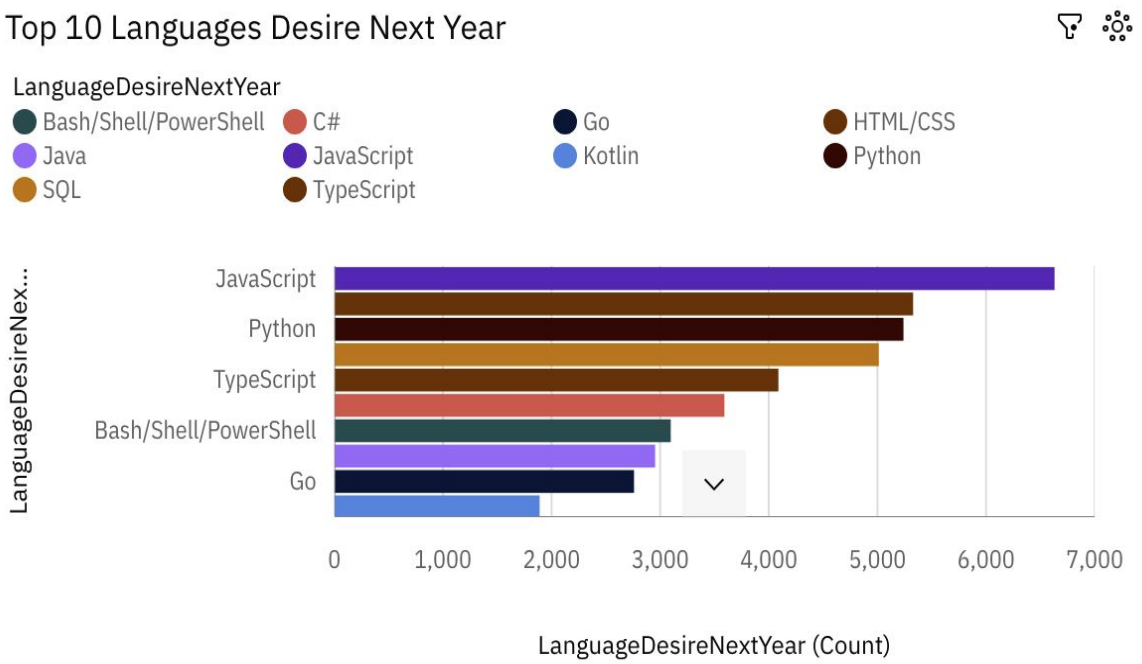
PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



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PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript and HTML/CSS emerge as the most used programming languages among all respondents
- SQL also maintains a significant presence.
- Python just edged out Java in overall ranking.

Implications

- The dominance of JavaScript and HTML/CSS underscores their indispensability in modern web development, highlighting the importance of mastering them for developers.
- The high usage of SQL emphasizes the critical role of data management and querying in modern software applications, across both web and non-web environments.
- The rise of Python might also reflect its versatility and ease of use, attracting developers across various domains from data science to software development.

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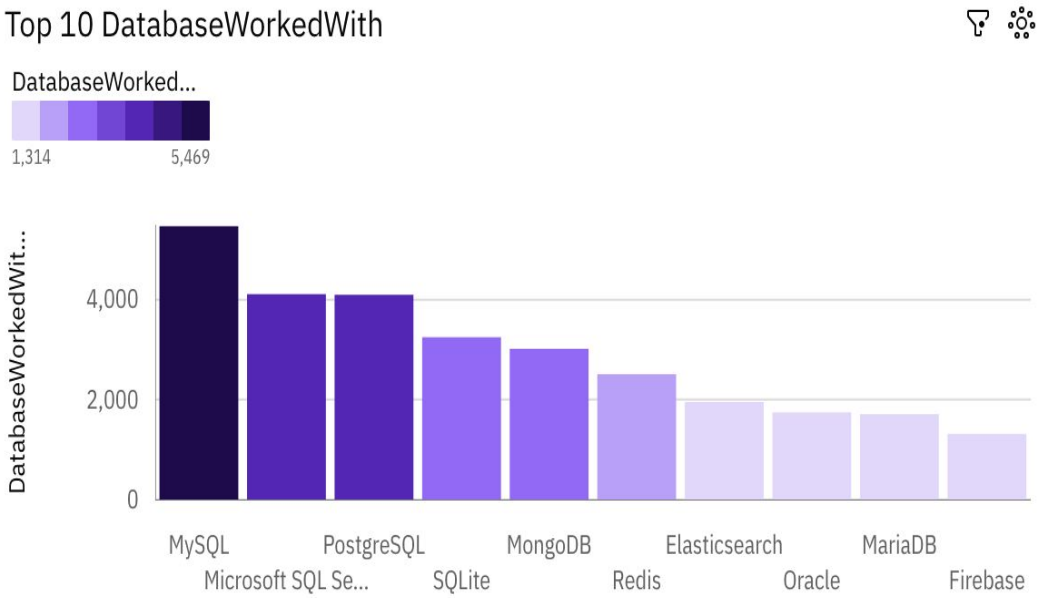
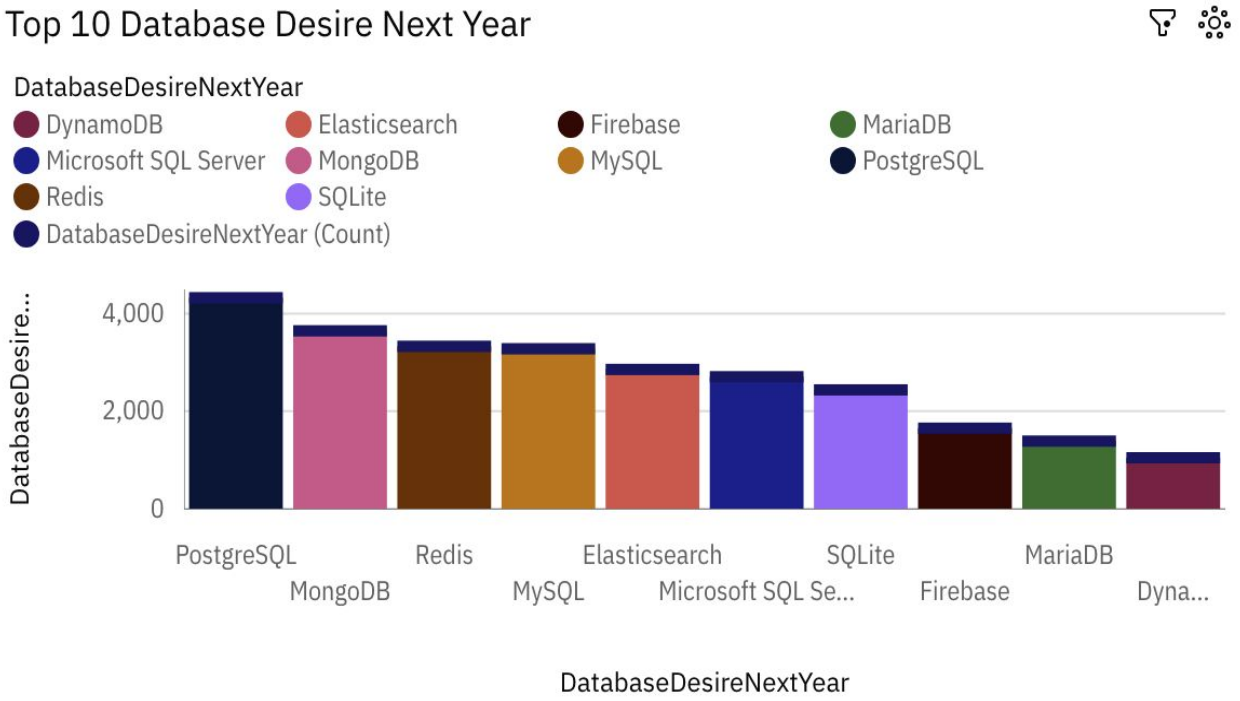
DATABASE TRENDS

Current Year



Next Year



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DATABASE TRENDS- FINDINGS & IMPLICATIONS

Findings

- MySQL leads as the most used DBMS among all respondents.
- PostgreSQL and Microsoft SQL Server follow closely behind MySQL.
- MongoDB ranks as the top Nosql database.

Implications

- The popularity of MySQL, PostgreSQL, and Microsoft SQL Server underscores the importance of relational databases in various applications.
- The high usage of MongoDB reflects the growing trend towards NoSQL databases,

driven by the need for flexible data models and scalability, particularly in modern web and mobile applications.

- The diverse range of database systems utilized by developers indicates the importance of selecting the right tool for the job, considering factors such as data structure, scalability, and performance requirements.

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DASHBOARD

Dashboard Link:

https://github.com/Rohullah2024/myProject.git

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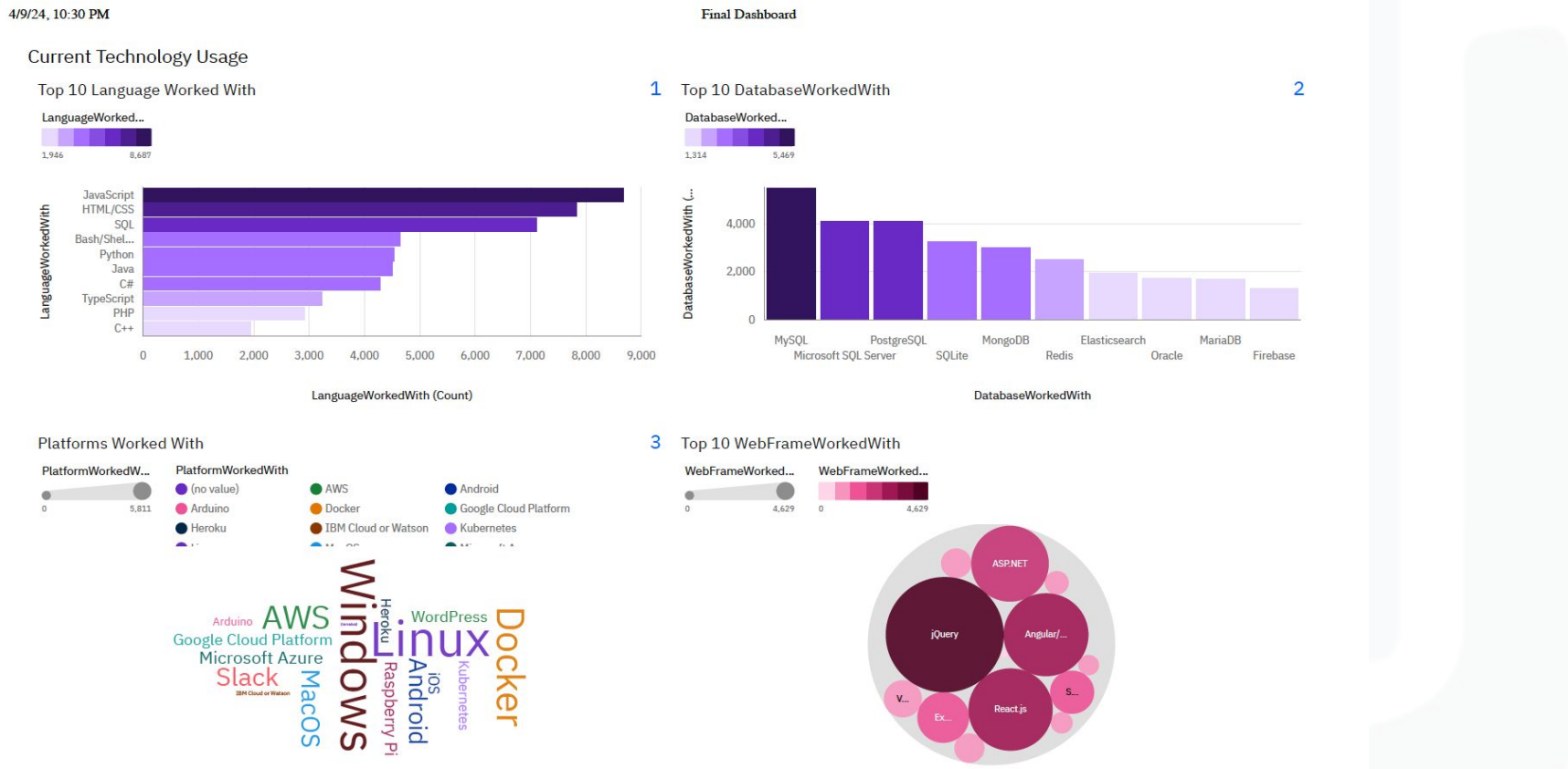
DASHBOARD TAB 1



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DASHBOARD TAB 2

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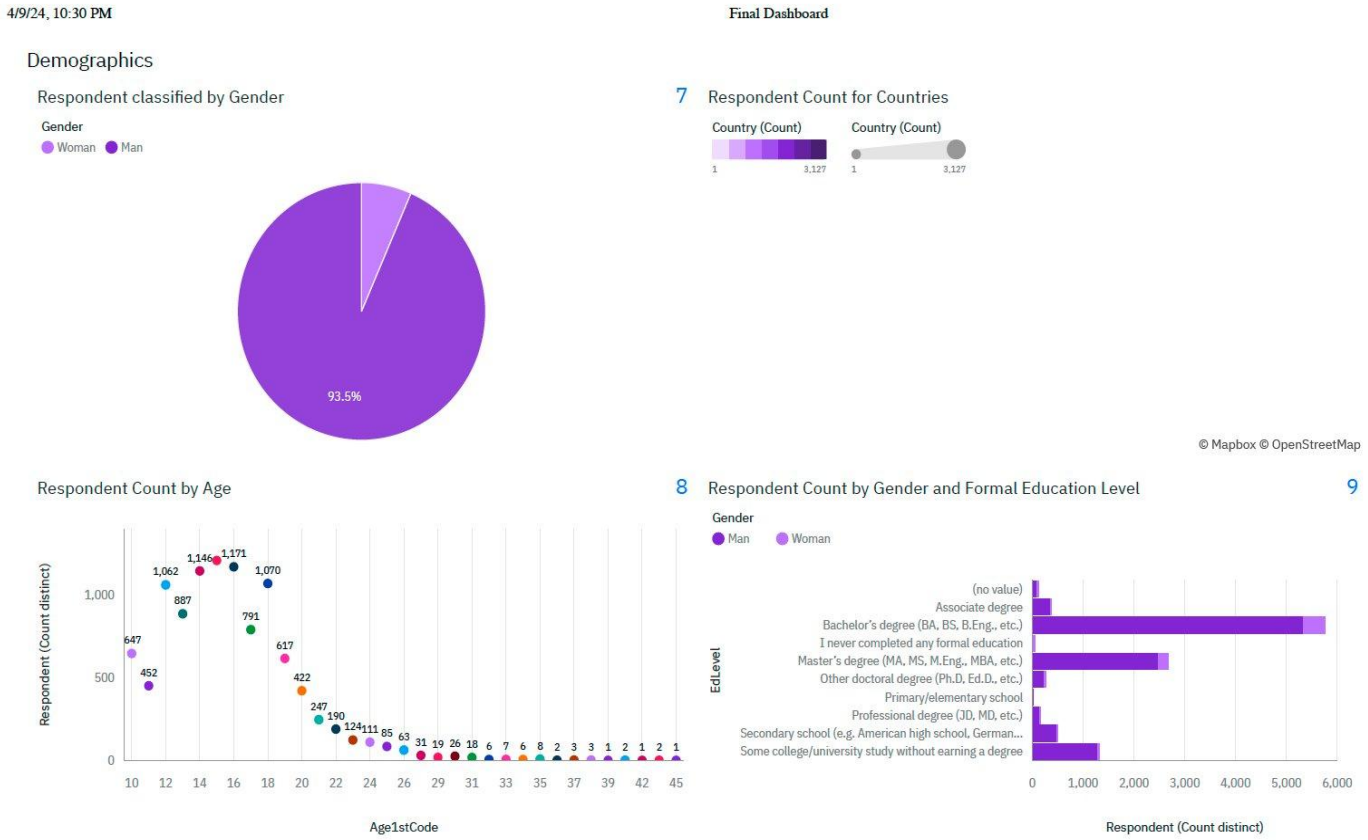
DASHBOARD TAB 3



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DISCUSSION

- The dominance of JavaScript and HTML/CSS and the adoption of MySQL as the leading database management system
- Highlights the central role of web
- development in the programming landscape
- Opens up discussions on the significance of client-side scripting and styling, trends in web development frameworks, and the evolving nature of web technologies

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OVERALL FINDINGS & IMPLICATIONS

Findings

- Technology Trends: The dominance of JavaScript and HTML/CSS underscores the importance of staying updated with technology trends in web development.
- Data Management: The prevalence of MySQL, PostgreSQL, and Microsoft SQL Server highlights the critical role of effective data management in software development.
- Diversity of Tools: The diverse range of programming languages and database systems utilized by developers underscores the importance of understanding the strengths and weaknesses of different tools.

Implications

- Web Dominance: The widespread usage of JavaScript and HTML/CSS indicates the dominance of web development in the programming ecosystem, reflecting the growing importance of online platforms and digital experiences.
- Database Diversity: The variety of database management systems used highlights the importance of flexibility and adaptability in data storage solutions. Organizations must consider factors such as data structure, scalability, and performance when selecting a database system.
- Industry Standardization: The popularity of certain technologies like JavaScript and MySQL suggests a degree of industry standardization, where certain tools become widely adopted due to their proven reliability and effectiveness. This can simplify collaboration and interoperability within the developer community.

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CONCLUSION

- The findings highlight the fluidity of the programming landscape and the crucial role of technology in catalyzing innovation across various industries.
- As developers navigate this constantly evolving terrain, possessing a comprehensive understanding of diverse programming languages and database systems becomes imperative to meet the requirements of modern applications and ensure optimal outcomes.

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