



# Developer Choices and Trends

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November 2024

# OUTLINE

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

# EXECUTIVE SUMMARY

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- Programming Languages and Database Trends
- Future Technology Trends
  - Programming Language for next year
  - Databases for the next year
  - Web Frameworks for the next year
  - Platforms for the next year
- Respondents by Country
- Respondents by Age
- Respondents by Gender

# INTRODUCTION

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- **Purpose:** The survey aims to understand current trends and preferences in programming languages among developers.
- **Scope:** It covers a diverse range of languages, from popular mainstream choices to emerging ones.
- **Key Findings:** The analysis highlights shifts in language popularity, common use cases, and developer satisfaction levels.
- **Audience:**
  - IT Head
  - HR Personal

# METHODOLOGY

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- Data Collection Source
  - Stack Overflow Developer 2019 Survey
- Data Wrangling
- Data Analysis
- Data Visualization
  - Build Dashboard
  - Presentation

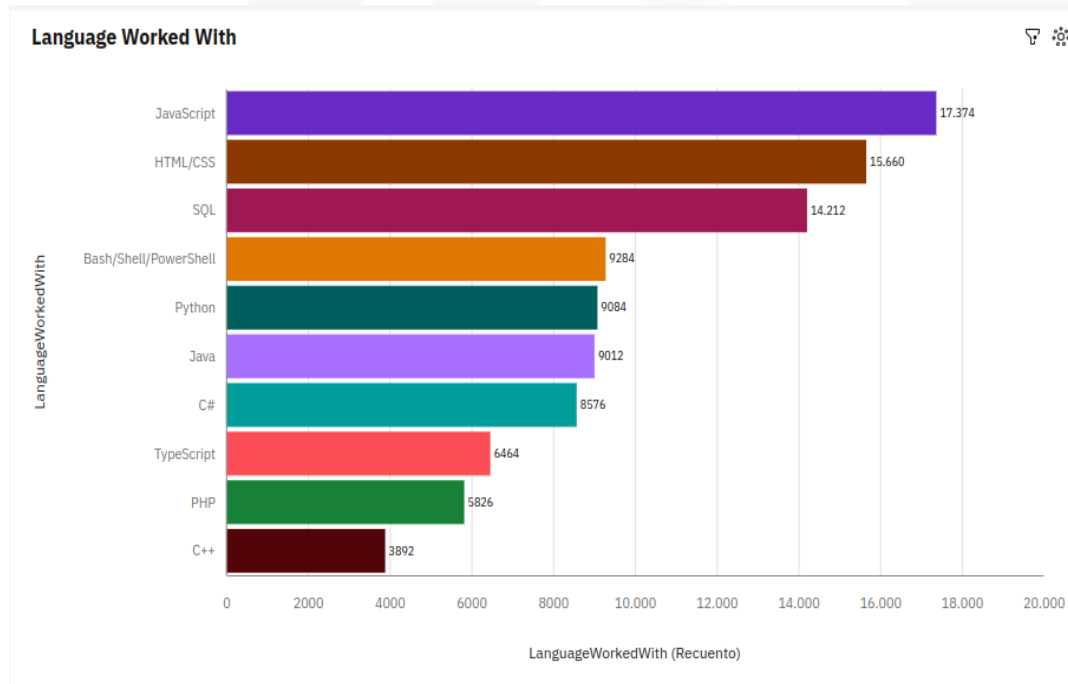
# RESULTS

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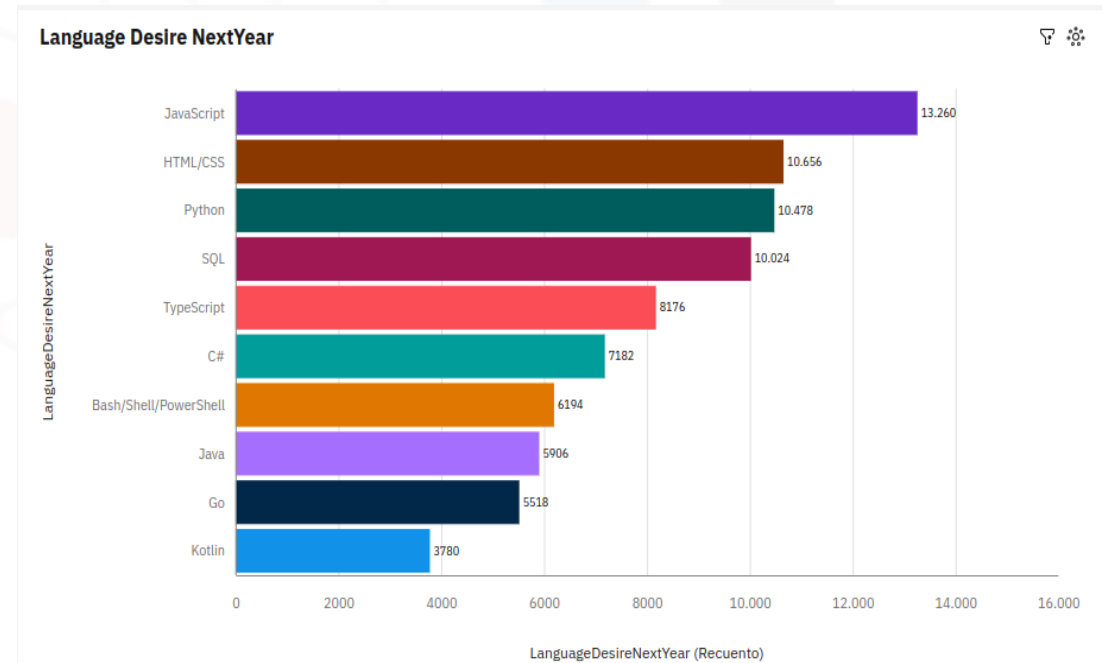


# PROGRAMMING LANGUAGE TRENDS

## Current Year



## Next Year



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- JavaScript, HTML/CSS, SQL, are the most used this year.
- Python still in top 5.
- PHP and TypeScript are the less used web programming in top 10.

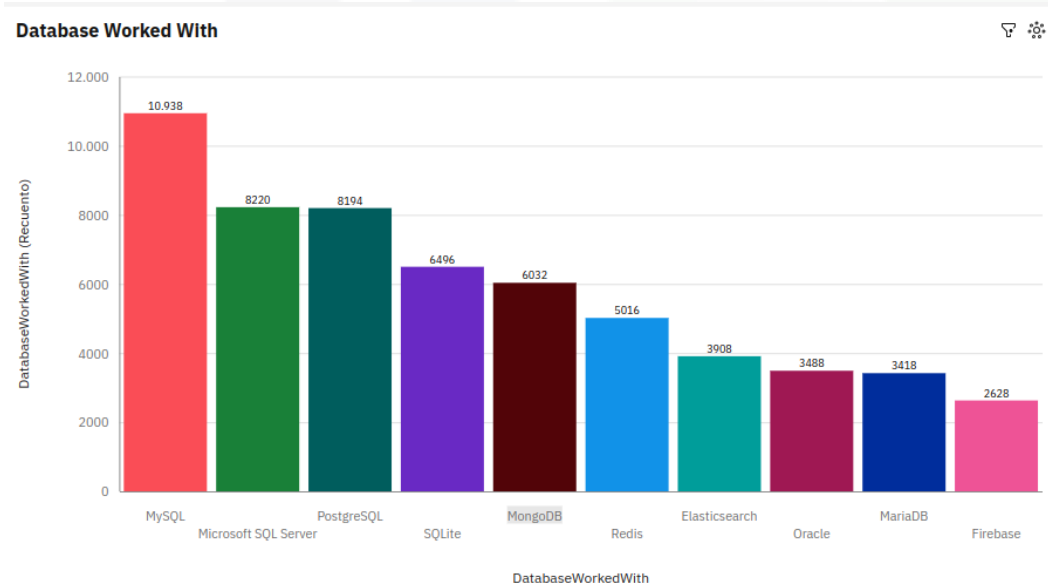
## Implications

- Python is set to gain even more popularity, driven by its strong application in machine learning and data science.
- Languages like Kotlin are increasingly in demand, especially for developing robust, native applications across multiple platforms.
- Web development remains the most essential area in the programming world, continually evolving with new frameworks and tools to meet global demand.

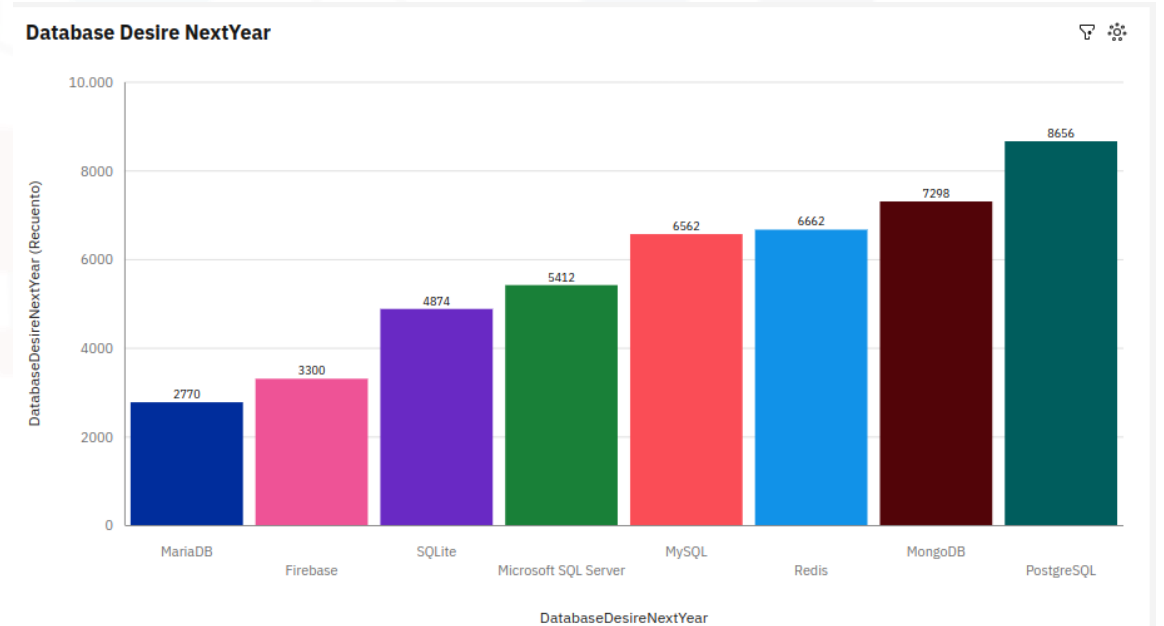


# DATABASE TRENDS

## Current Year



## Next Year



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- MySQL, SQL Microsoft Server and Postgres are the top 3.
- Relational Database are the most used.
- Non-Relational Databases have been using a lot by devs.

## Implications

- Non-relational databases are expected to see a significant rise in popularity, driven by the need for flexible and scalable data solutions.
- PostgreSQL is projected to claim the top rank, as developers favor its robustness and versatility, while MySQL may see a dip in popularity, moving to fourth place.
- Redis is emerging as a key player, valued for its speed and efficiency in caching and real-time applications.

# DASHBOARD

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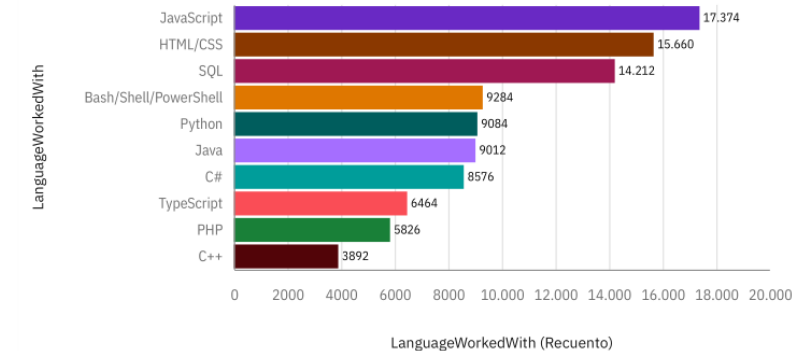
<https://github.com/Gab1nh0/IBM-Capstone-Project/blob/main/CapstoneProjectDashboard.pdf>

# DASHBOARD TAB 1

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Current Technology Usage

## Language Worked With

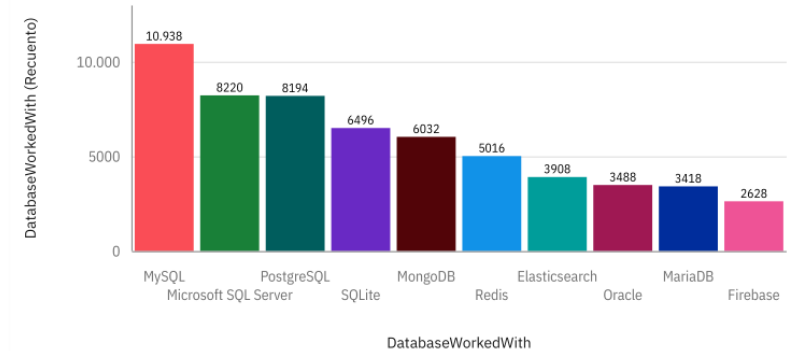


## Platform Worked With

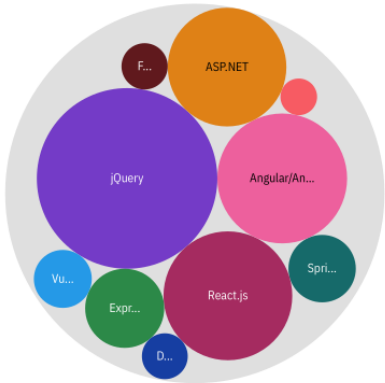


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## Database Worked With



## WebFrame Worked With

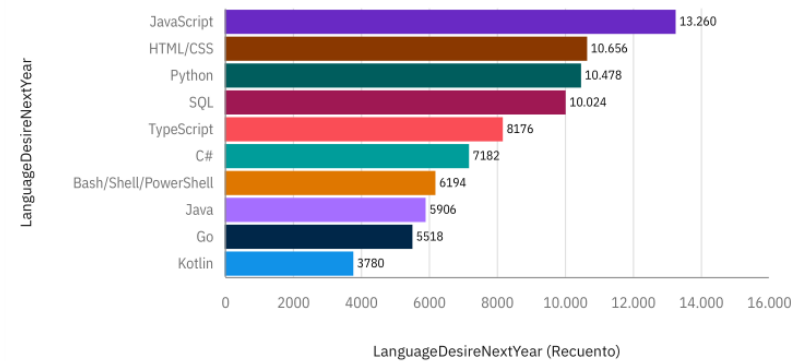


# DASHBOARD TAB 2

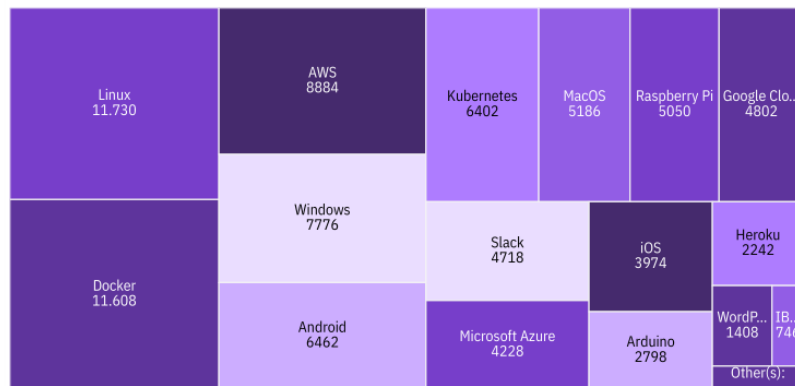
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Future Technology Trend

Language Desire NextYear

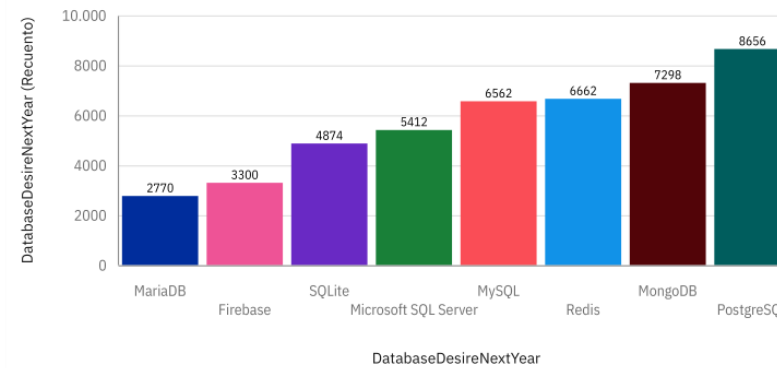


Platform Desire NextYear

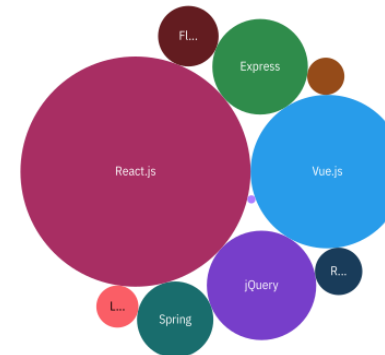


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Database Desire NextYear



WebFrame Desire NextYear



# DASHBOARD TAB 3

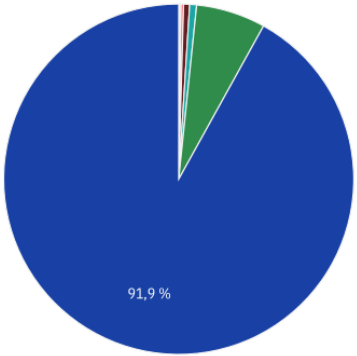
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Demographics

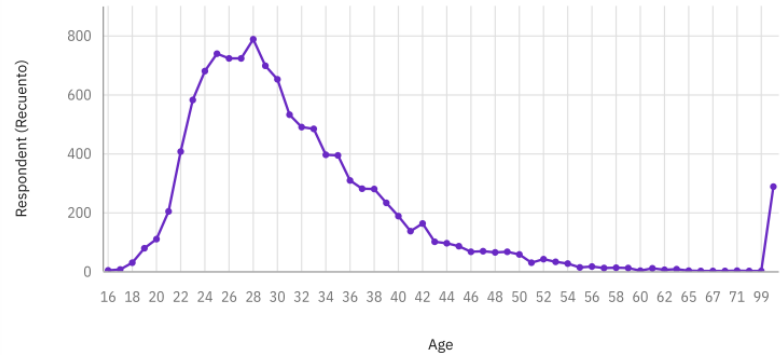
Respondent by Gender

Gender

- Woman;Man;Non-binary, genderq...
- Woman;Man
- Woman;Non-binary, genderqueer,...
- Man;Non-binary, genderqueer, or ...
- Non-binary, genderqueer, or gend...
- (ningún valor)
- Woman
- Man

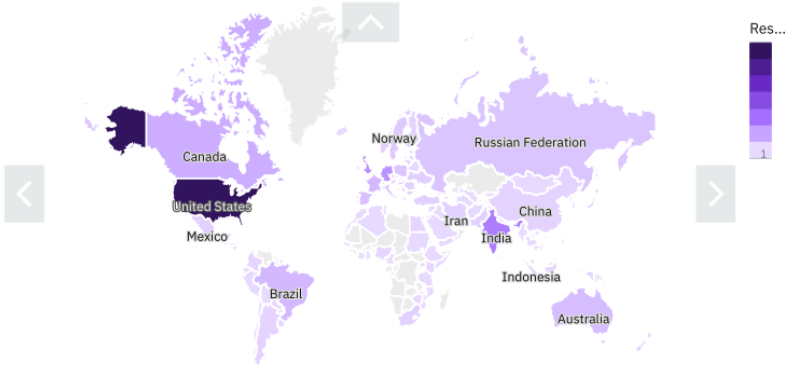


Respondent by Age

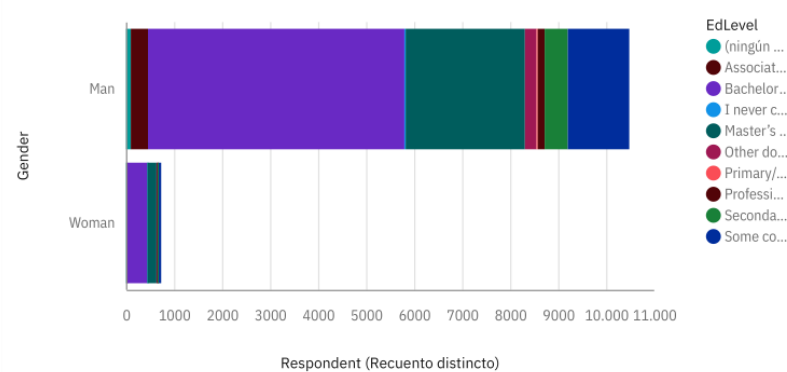


CapstoneProjectDashboard

Respondents by Country



Respondent por Gender



# DISCUSSION

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- Current and emerging technology trends.
- Increasing female representation in the technology field.
- Bridging the digital divide in developing countries.

# OVERALL FINDINGS & IMPLICATIONS

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## Findings

- Increased Adoption of Python and Machine Learning Tools
- Shift Toward Non-Relational and Real-Time Databases
- Steady Importance of Web Development Paired with Native Multiplatform Growth

## Implications

- As Python continues to dominate machine learning, developers may prioritize learning Python and related frameworks to stay competitive in data-driven industries.
- With rising demand for flexible data solutions, companies may invest more in non-relational databases like Redis, impacting hiring needs and backend architecture choices.
- While web development remains critical, the demand for native multiplatform solutions like Kotlin may drive cross-functional skills, encouraging developers to diversify expertise in both web and mobile technologies.



# CONCLUSION

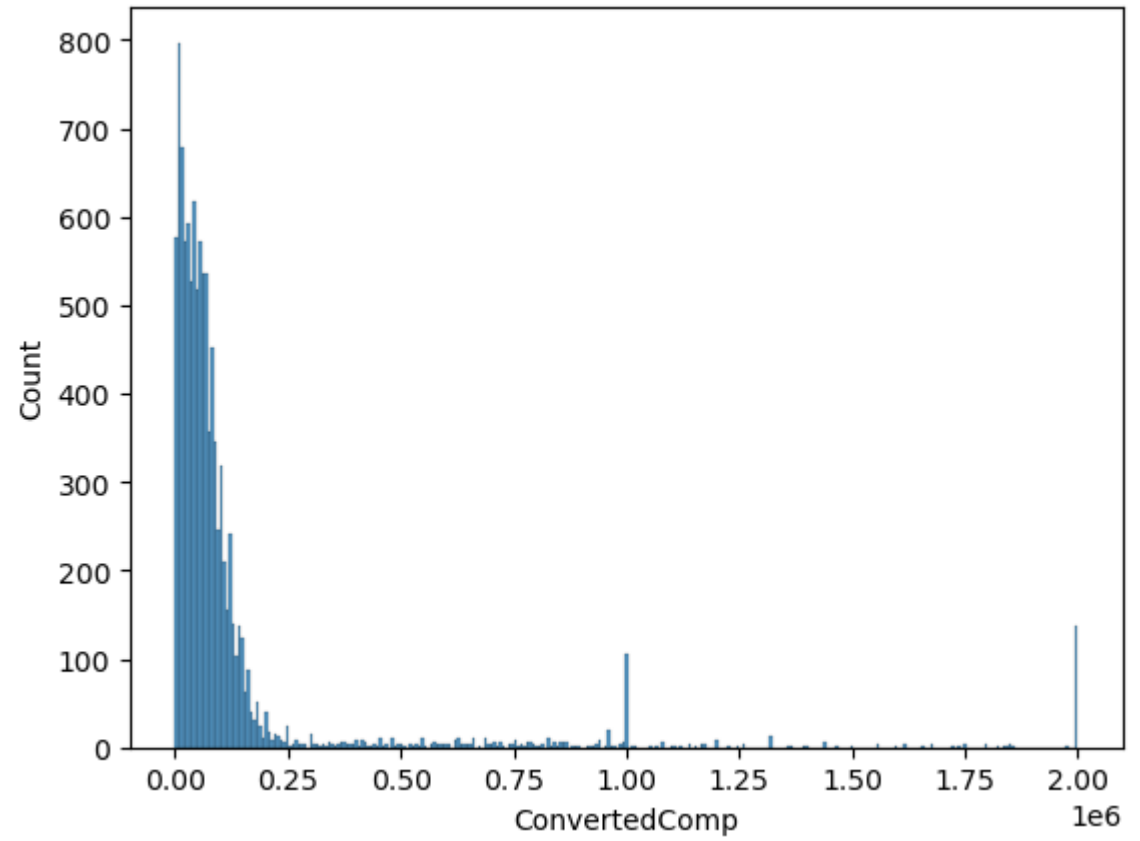
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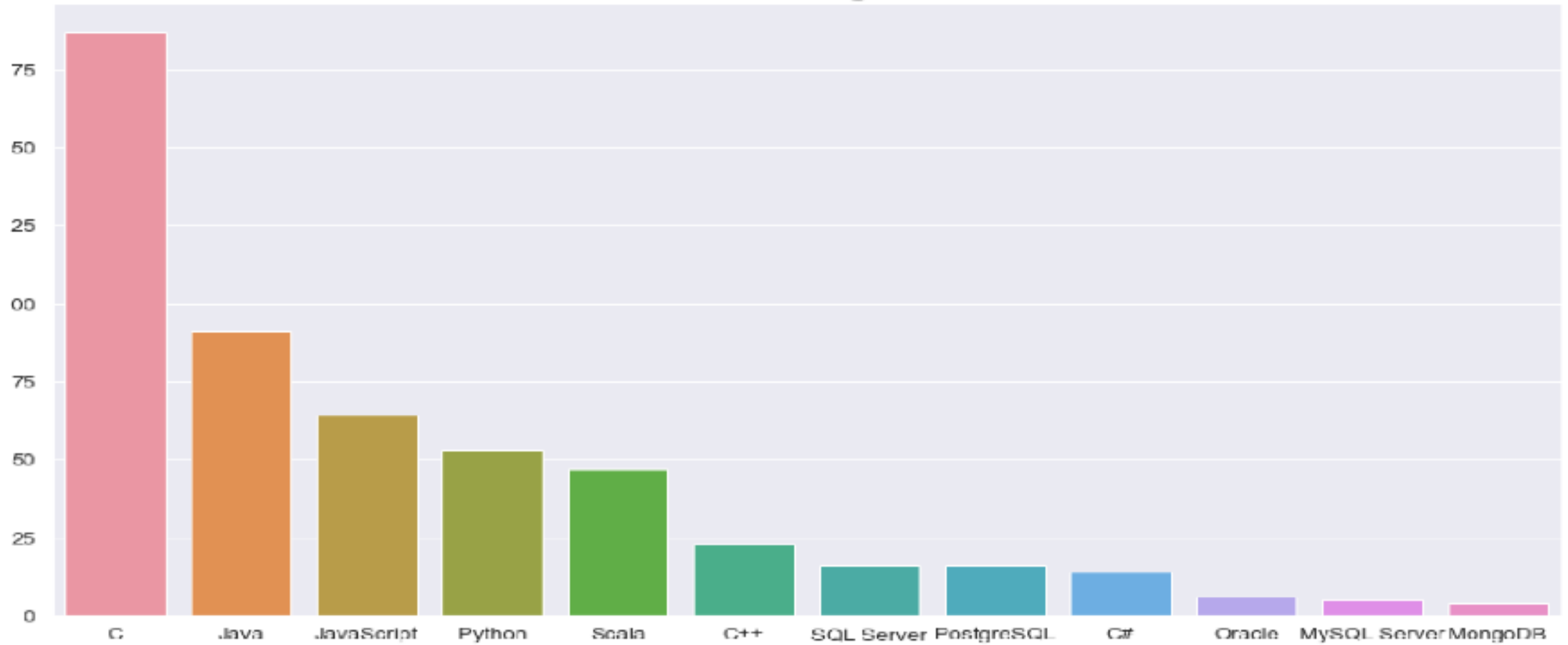
- Python's growth in machine learning and PostgreSQL's rise as a preferred database highlight key shifts in developer preferences.
- The increasing use of non-relational databases and tools like Redis underscores the value placed on scalability and real-time data handling.
- Kotlin's popularity reflects a trend toward seamless native app experiences across platforms.
- Despite changes, web development continues to be the core focus, maintaining its dominance as the world's most critical tech domain.

# APPENDIX

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# JOB POSTINGS



# POPULAR LANGUAGES

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