

# Title

## Developer Skills Trend Analysis



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Paridhi Singh  
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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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- Analyzed multi-source data including developer surveys, job postings, and training portals
- Identified top programming languages, databases, and Web Frameworks in current demand
- Designed a 3-tab interactive dashboard using IBM Cognos Analytics
- Applied filtering, aggregation, and sorting to reveal key insights



# INTRODUCTION

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- Analyzed global developer survey data
- Focused on programming, databases, platforms & frameworks
- Created 3-tab dashboard using IBM Cognos Analytics
- Identified top tech skills and developer preferences
  - Visualized current usage and future trends
  - Insights support skill planning and tech alignment



# METHODOLOGY

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- Collected developer survey dataset (CSV format)
- Explored fields like languages, databases, platforms
- Created 3-tab dashboard using IBM Cognos Analytics
- Applied filters, sorting, and top-N aggregation
  - Used visualizations: bar, pie, map, word cloud, bubble
  - Extracted key trends from current & future tech data



# RESULTS

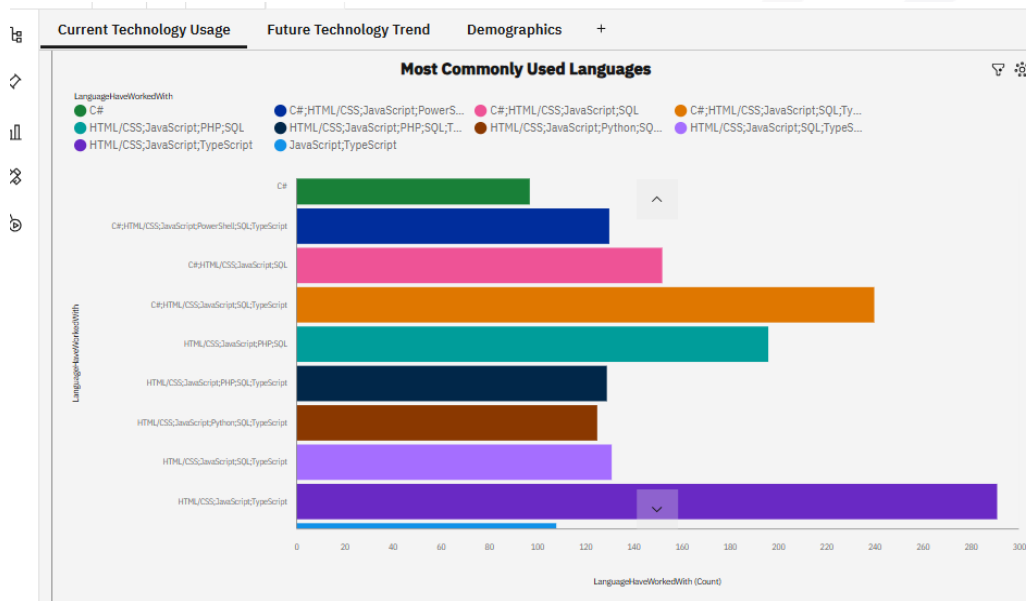
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- The analysis revealed that **C#, HTML/CSS, JavaScript, and TypeScript** are the most commonly used languages among respondents. **PostgreSQL** ranked highest among database technologies in current usage.
- In terms of web frameworks, **Spring Boot** and **React** were the most frequently worked with.
- Among platforms, **Amazon Web Services (AWS)** had the highest count, followed by Microsoft Azure.
- The majority of respondents were aged **25–34 years**, and most held a **Bachelor's or Master's degree**.
- These results reflect strong adoption of enterprise technologies and cloud infrastructure across the developer community.

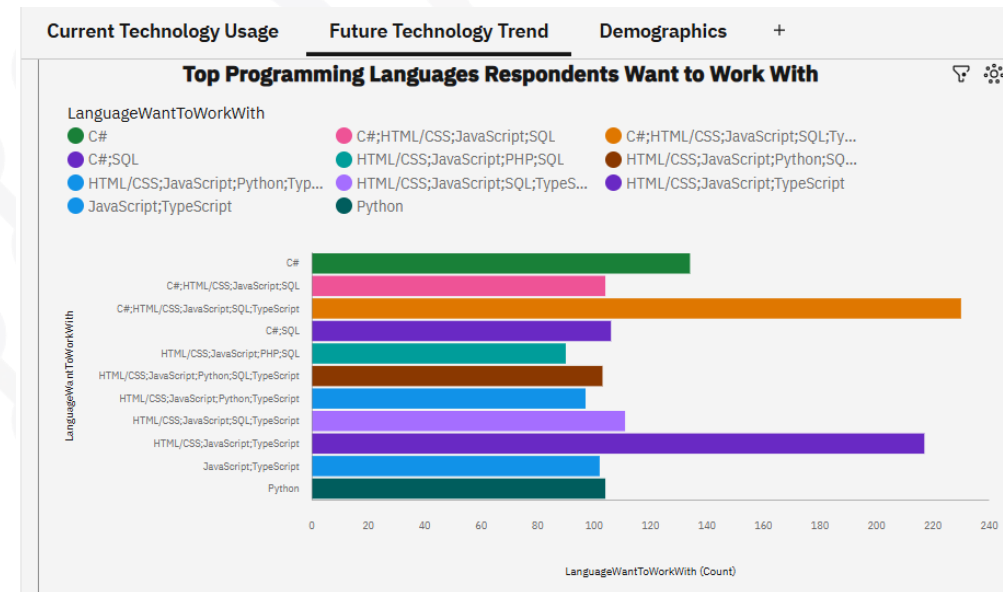


# PROGRAMMING LANGUAGE TRENDS

## Current Year



## Next Year



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- Most developers work with **language combinations** (e.g., C#, SQL, JavaScript)
- **TypeScript** is gaining popularity in modern stacks
- **Core languages** like JavaScript and SQL remain dominant

## Implications

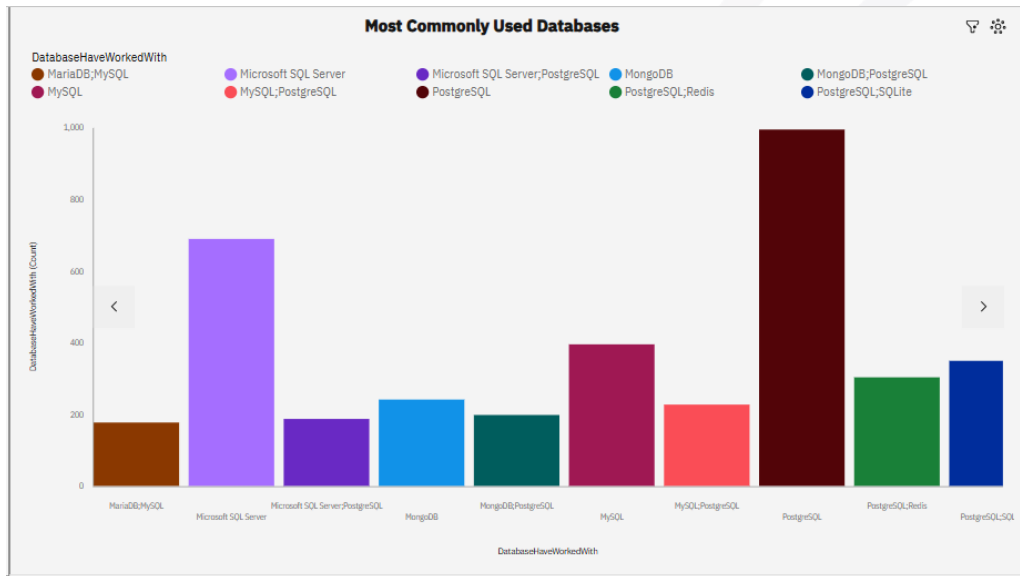
- Focus on **multi-language skillsets** in hiring/training
- Add **TypeScript** to upskilling programs
- Balance **modern and legacy** tech in development teams



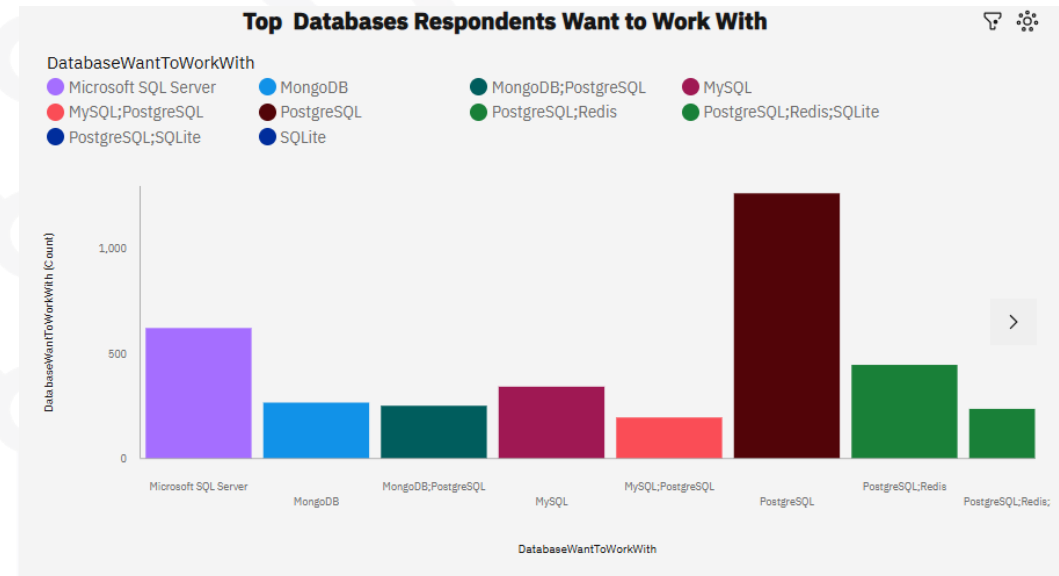


# DATABASE TRENDS

## Current Year



## Next Year



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- **PostgreSQL** is the most commonly used database
- **MySQL** and **MongoDB** also show strong usage
- Developers often work with **multiple databases** together

## Implications

- PostgreSQL skills are **highly valuable** in the job market
- Support for **open-source databases** is increasing
- Teams need **flexibility across DBMS tools** for real-world projects



# DASHBOARD

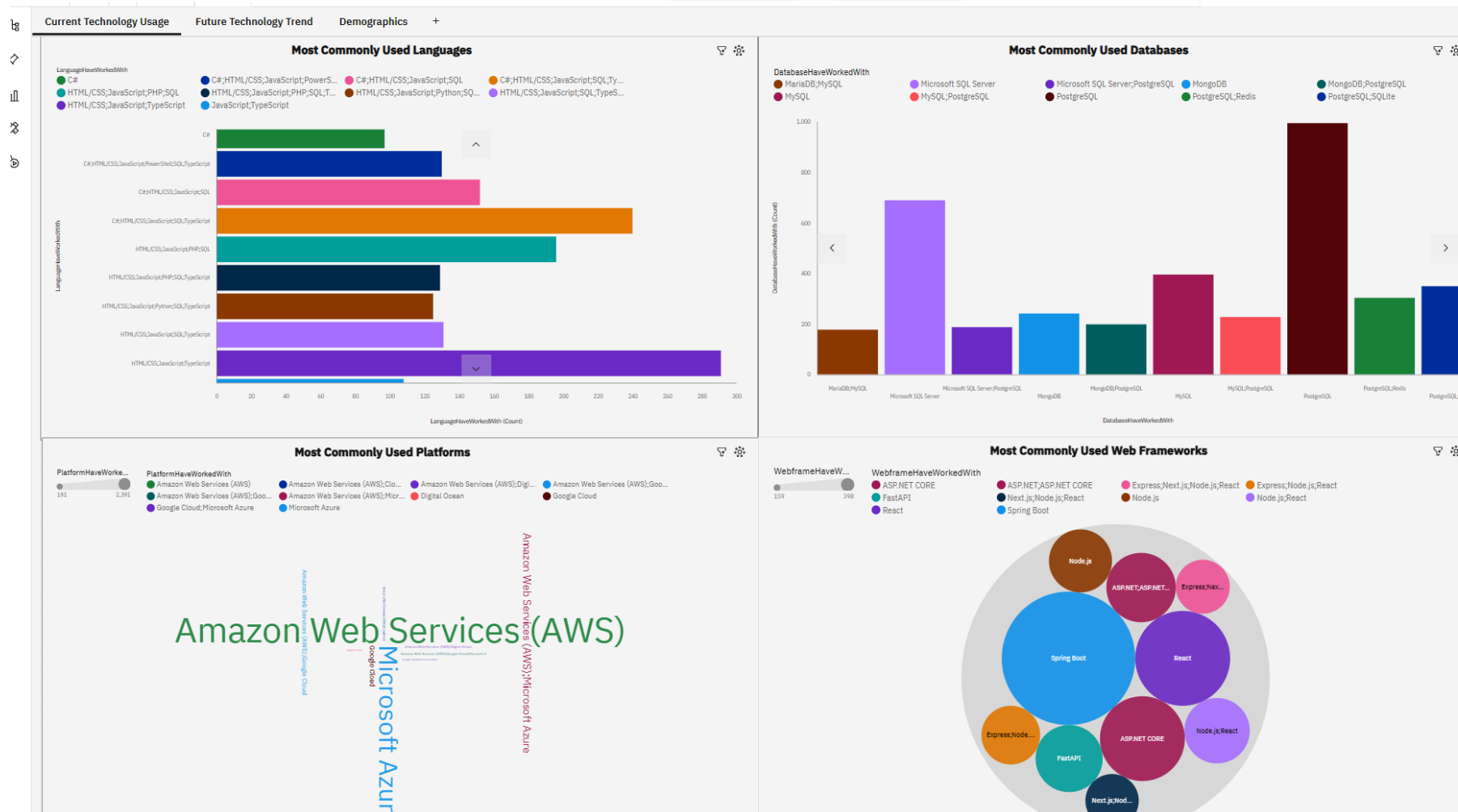
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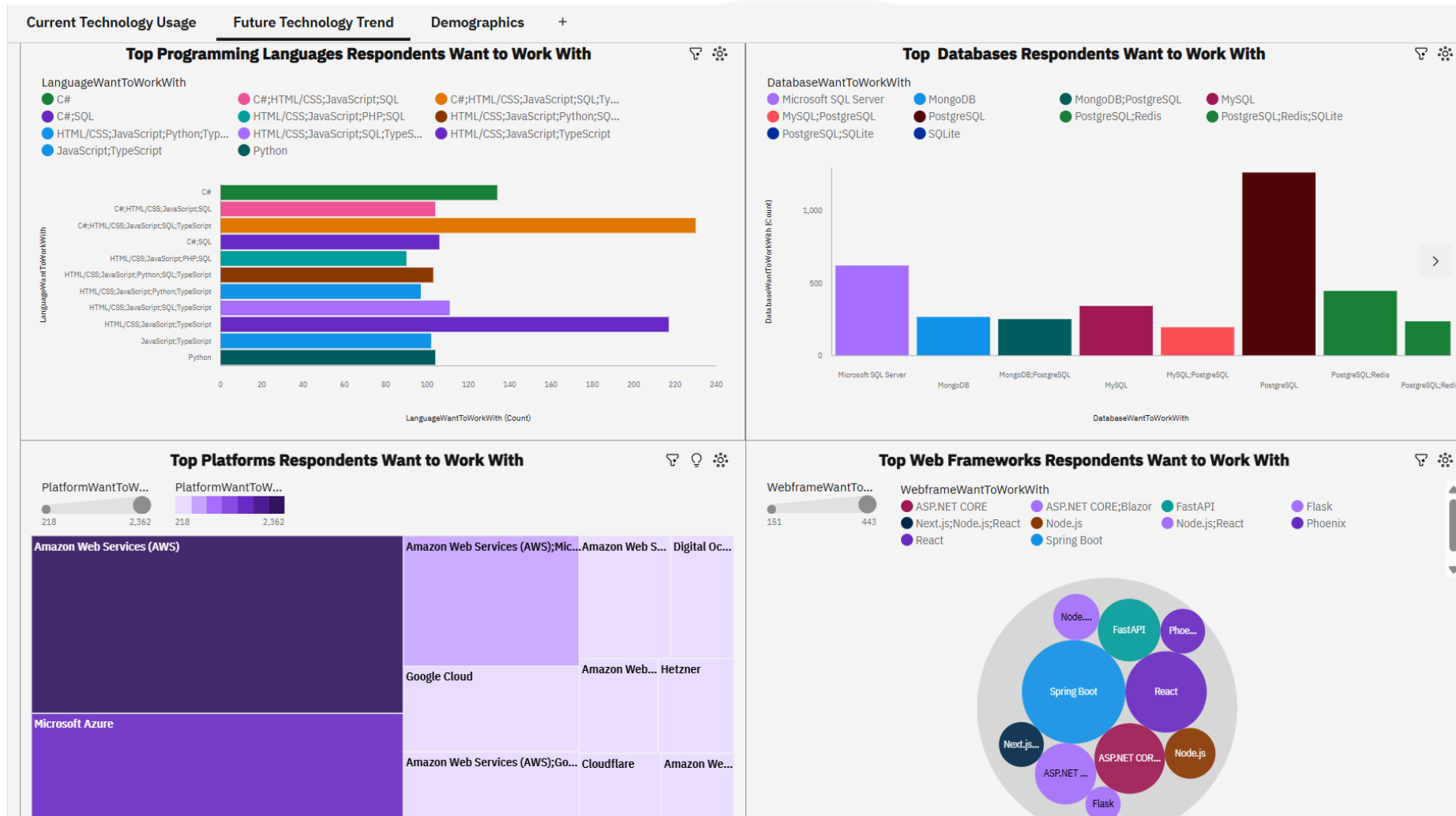
<https://github.com/paridhisingh18/ibm-capstone-project.git>.



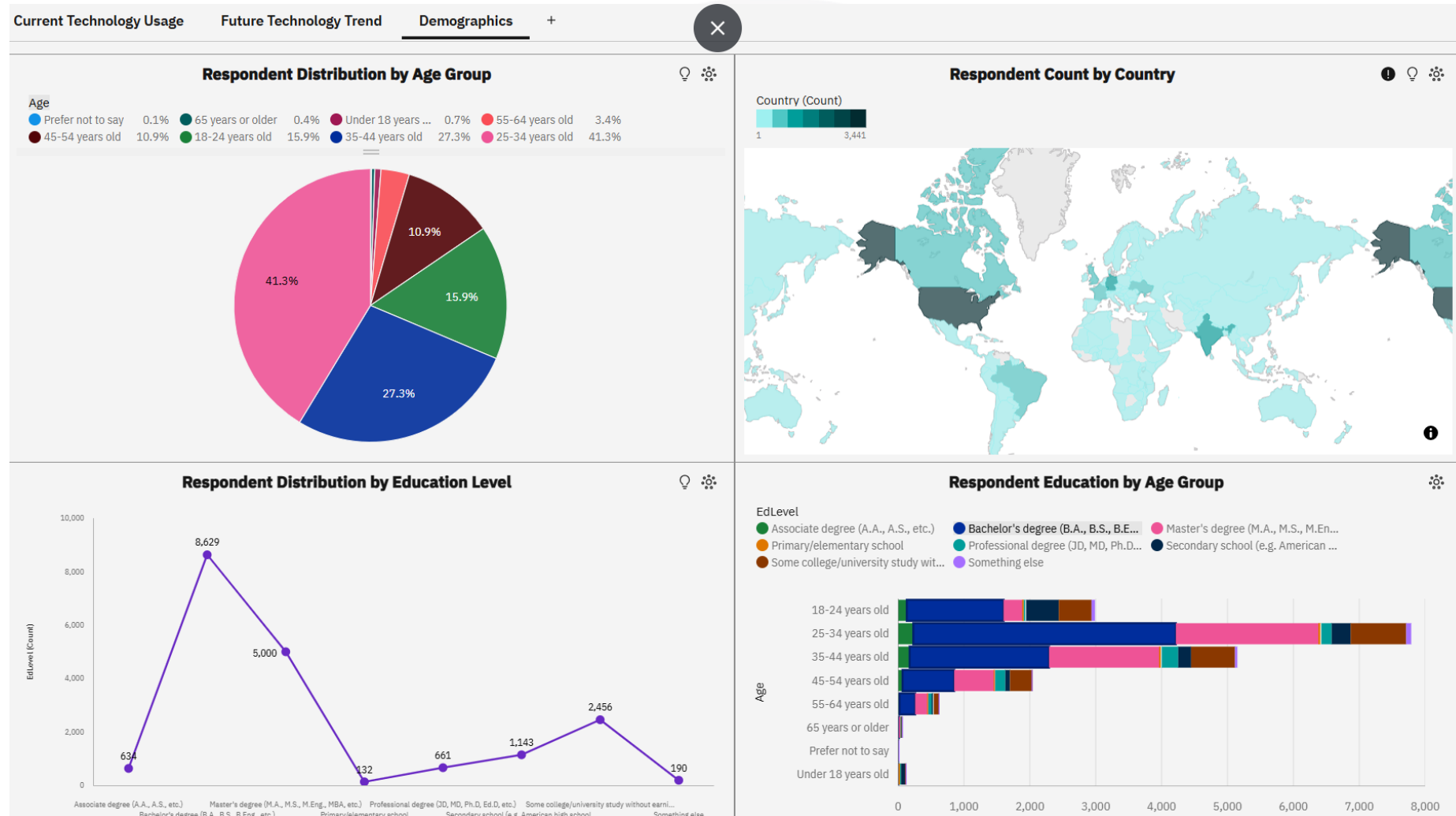
# DASHBOARD TAB 1



# DASHBOARD TAB 2



# DASHBOARD TAB 3



# DISCUSSION

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- The analysis shows strong use of open-source tools like **PostgreSQL** and **React**, with developers commonly working across **multiple languages**. The dominant **25–34 age group** reflects a mid-career audience driving adoption. These trends highlight the need for **versatile, stack-based training** over single-skill focus.



# OVERALL FINDINGS & IMPLICATIONS

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## Findings

- Developers prefer **multi-language stacks** over single-language use
- **PostgreSQL, React, and AWS** lead in usage across categories
- Majority of respondents are aged **25–34** with formal education

## Implications

- Training should focus on **tool combinations**, not isolated skills
- Emphasis on **open-source tech** is growing across the industry
- Programs should target the **mid-career developer** demographic





# CONCLUSION

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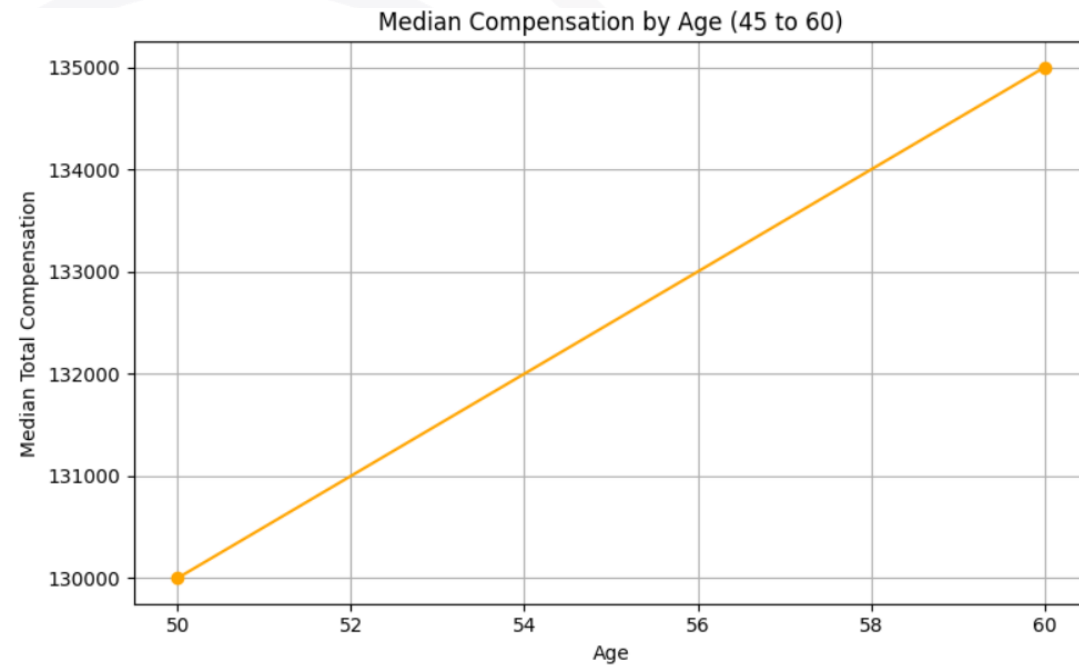


- **Open-source technologies** like PostgreSQL and React are highly favored
- Developers commonly work with **multiple tools and languages** together
- The **25–34 age group** leads technology adoption globally
- Organizations should focus on **stack-based training and hiring** strategies

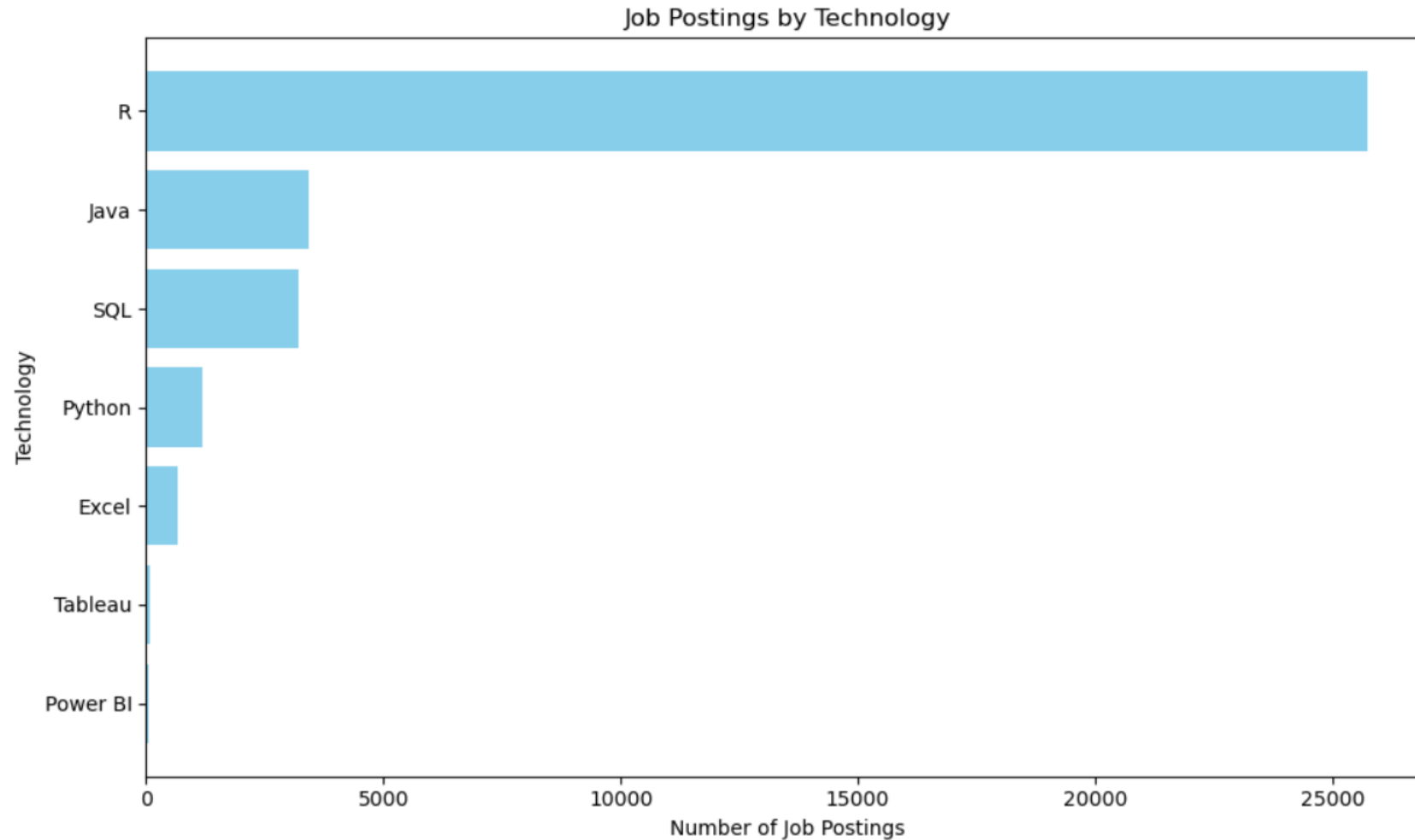


# APPENDIX

- Age vs Compensation – Additional Insight



# JOB POSTINGS



# POPULAR LANGUAGES

