



# Final Presentation

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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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- Currently, the most widely used programming language is JavaScript, with SQL ranking third and Python ranking fifth.
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- Looking towards the future of programming languages, JavaScript is predicted to remain at the forefront, with Python expected to become the third most widely used language.
- The most commonly used database in the coming years is expected to be PostgreSQL, with MongoDB ranking second and Oracle not making the top ten.
- Linux is predicted to be the most widely used operating system in the coming years.

# INTRODUCTION

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- This presentation aims to identify the most commonly used programming languages, databases, and platforms of today, as well as predict which ones will be the most commonly used in the future.
- The data collected for this presentation comes from participants across multiple countries, making the findings globally relevant.
- While we had participants from various age groups, we had a higher number of participants in the 24-32 age range.
- Through our analysis, we hope to provide valuable insights into the current and future trends in programming languages, databases, and platforms.

# METHODOLOGY

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- In this presentation, we utilized the data from "The 2019 Stack Overflow Developer Survey Results Are In".
- To gather the data used in this presentation, approximately 90,000 developers participated in a 20-minute survey.
- The data was analyzed using Cognos on IBM Cloud.

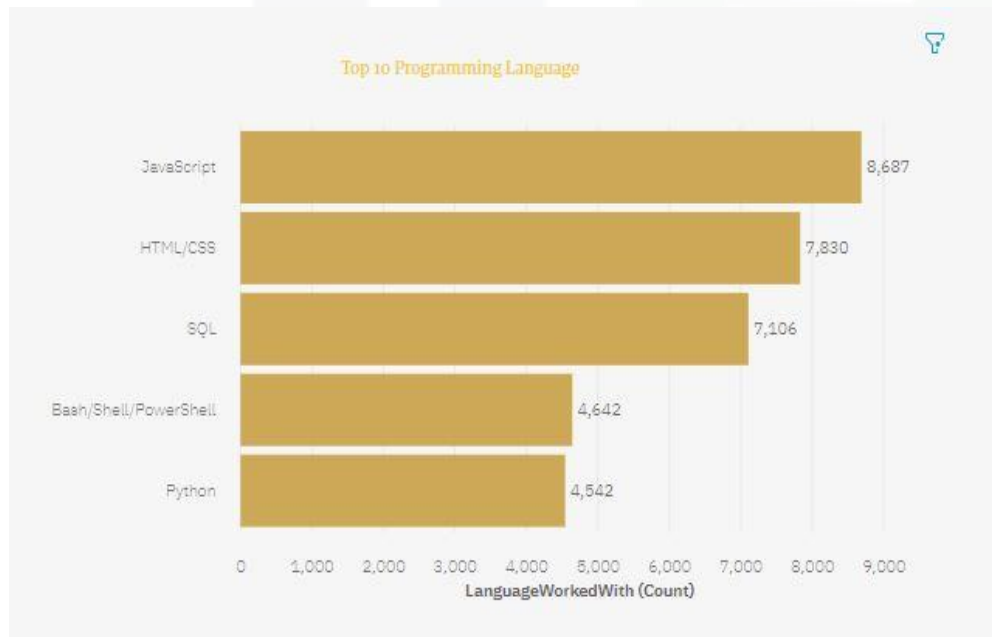
# RESULTS

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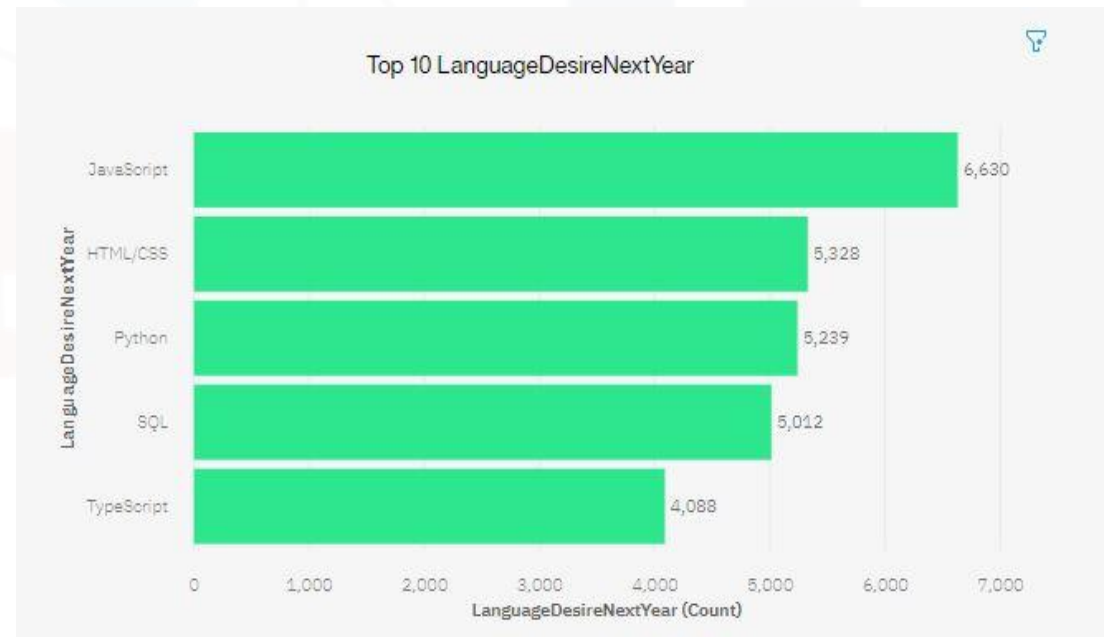
The results of the survey are quite significant as it had a participation of 90,000 developers from various countries. Python has been identified as the fastest-growing programming language. The majority of survey participants were male, indicating a gender gap in the field. To promote gender equality, creating women-only educational classes for learning Python, the fastest-growing language, could be beneficial. While MySQL is currently the most widely used SQL, it is expected that PostgreSQL and MongoDB will become increasingly prevalent in the future. Therefore, providing familiarity with PostgreSQL and MongoDB to employees may prevent future knowledge gaps.

# PROGRAMMING LANGUAGE TRENDS

## Current Year



## Next Year



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- JavaScript is the most used programming language and it seems that it will keep the first place in the future.
- Python is the 5th most used programming language today, but it is expected to be used more in the future.
- On the C side, it is predicted that the use of C++ will decrease and the use of C# will become widespread.

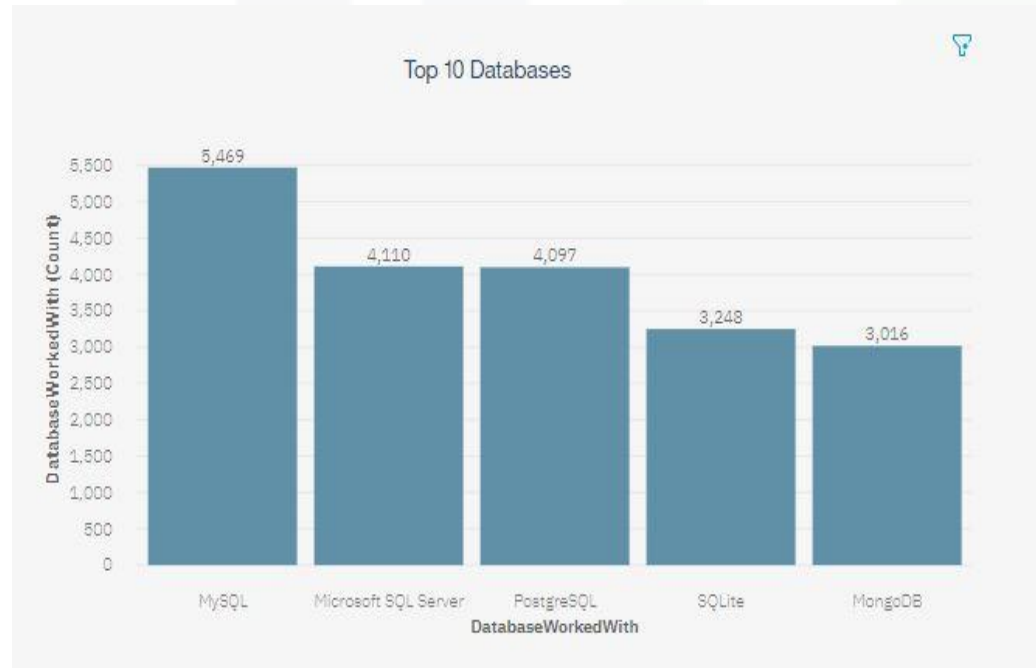
## Implications

- Considering that the use of Python will become widespread, tech companies need to address the advantages of Python.
- It is predicted that the use of C# on the C side will become widespread. It will be a future move for employees who provide C-based software to develop themselves in C#.
- The use of TypeScript is expected to increase significantly, so technology companies should learn the advantages of TypeScript and use it for business benefit.

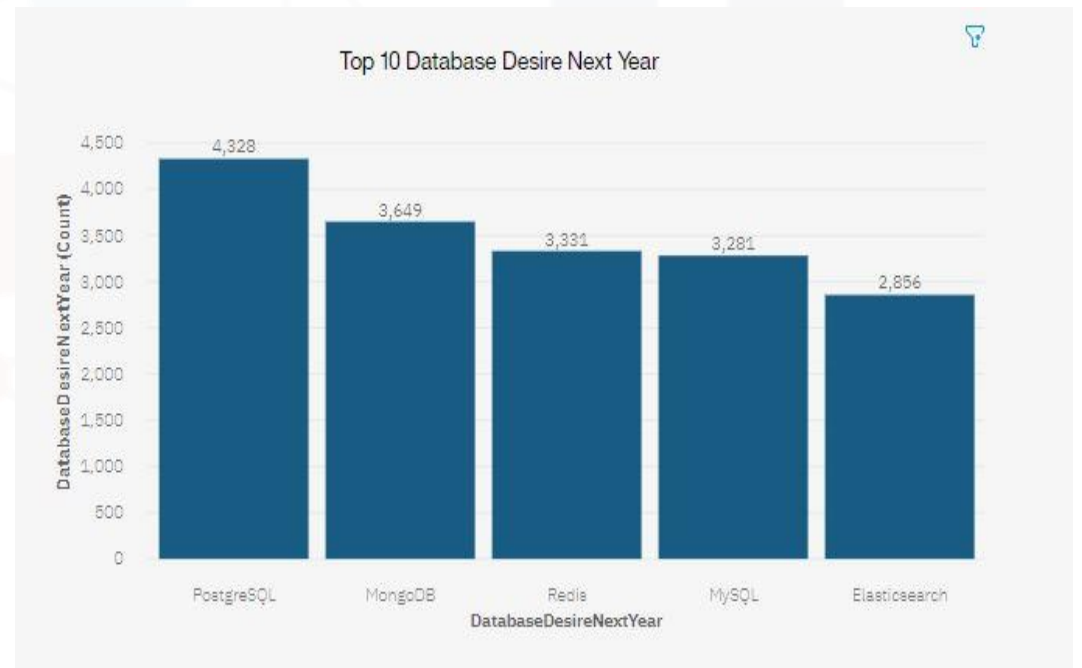


# DATABASE TRENDS

## Current Year



## Next Year



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- Although MySQL is the most used database today, it is predicted that it will regress to the fourth place in the future.
- PostgreSQL, which is the 3rd most common database today, may rise to the top in the coming years.
- MongoDB, the 5th most common database today, may rise to second place in the coming years.

## Implications

- It is foreseen that MySQL will be replaced by PostgreSQL and MongoDB. Companies should review the necessary investments in this context.
- Employees who use SQL can prepare themselves for the next years by increasing their familiarity with PostgreSQL and MongoDB.
- Considering that MySQL will be replaced by other databases, creating path plans for database transfers will protect them from future risks.

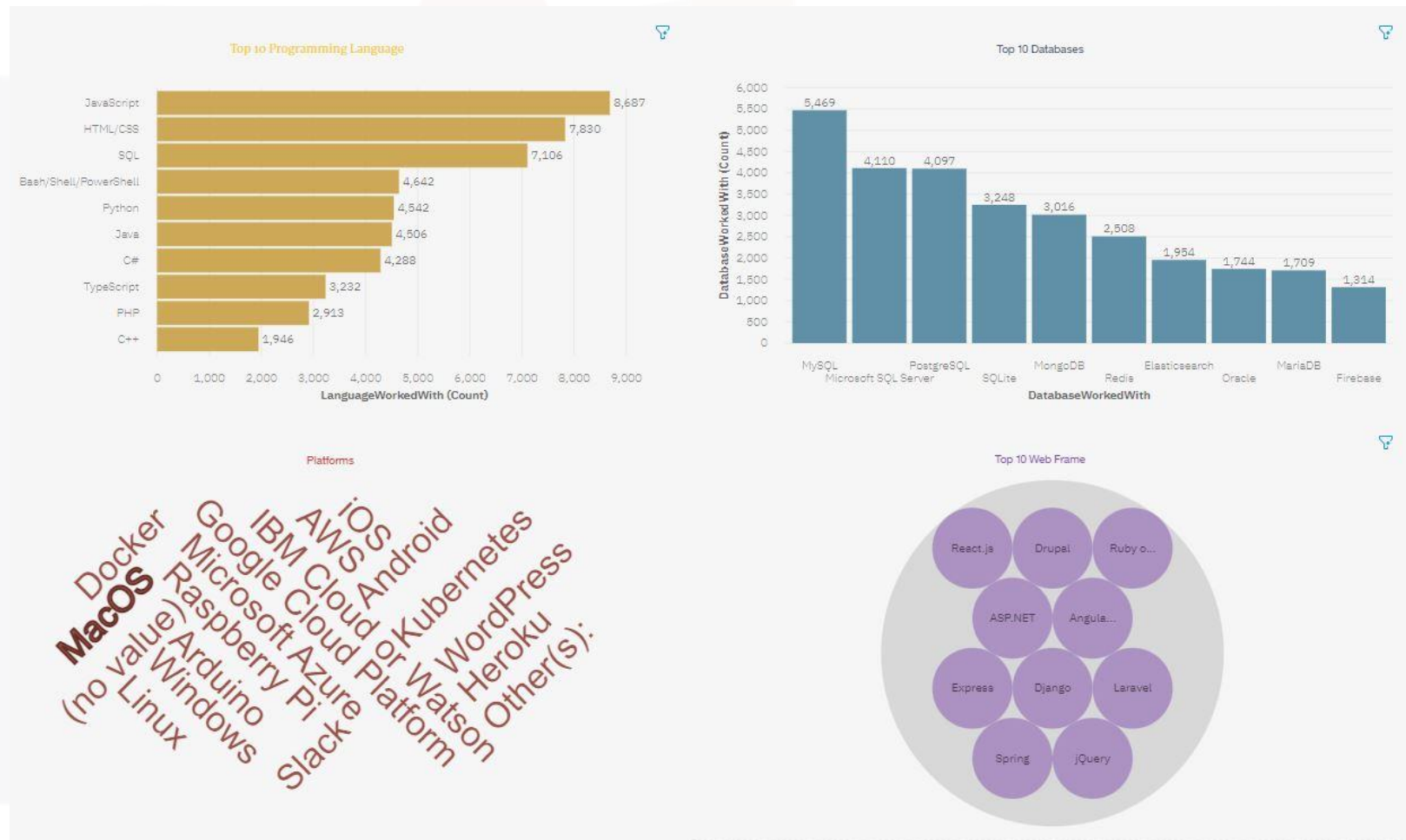
# DASHBOARD

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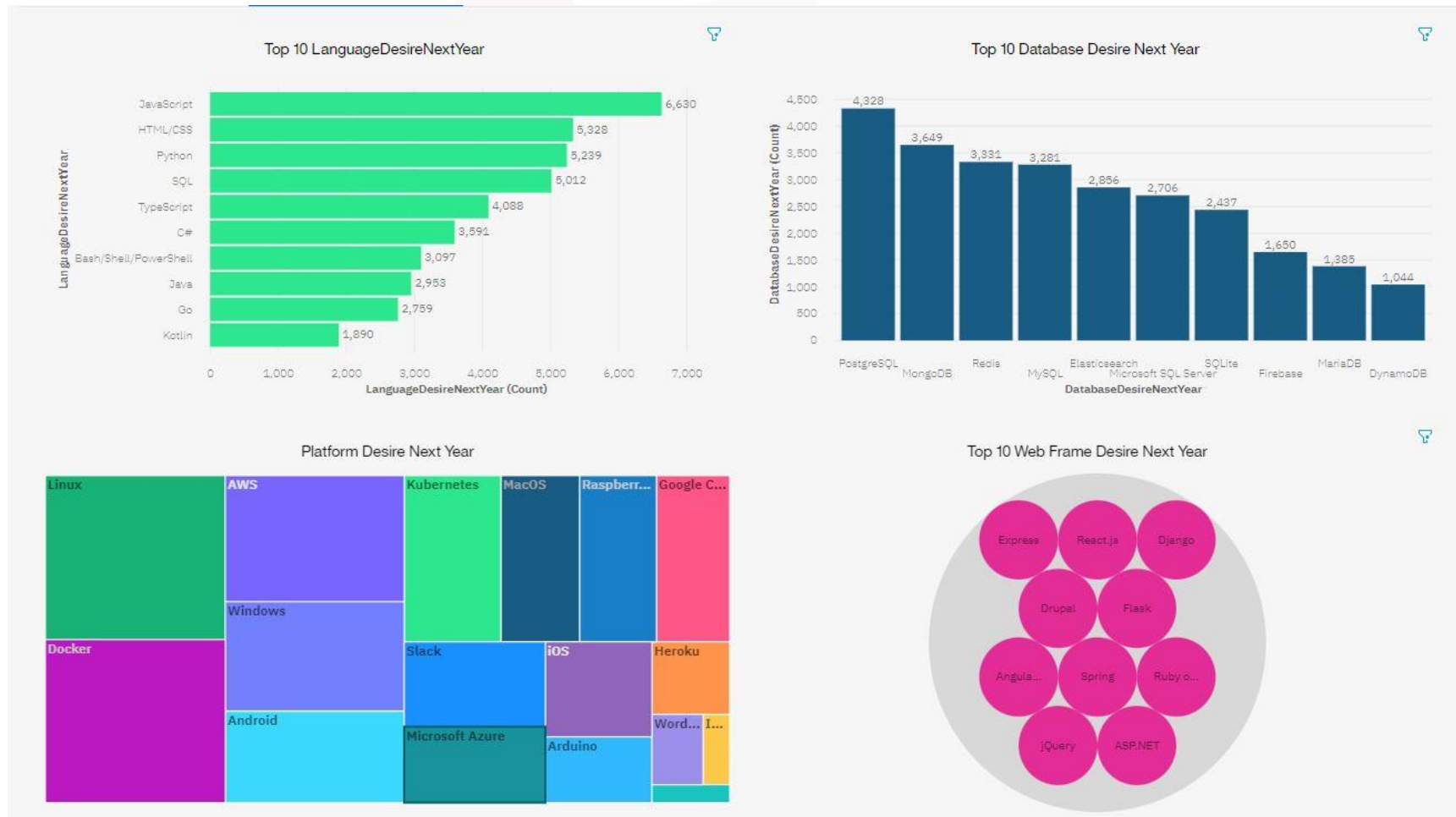


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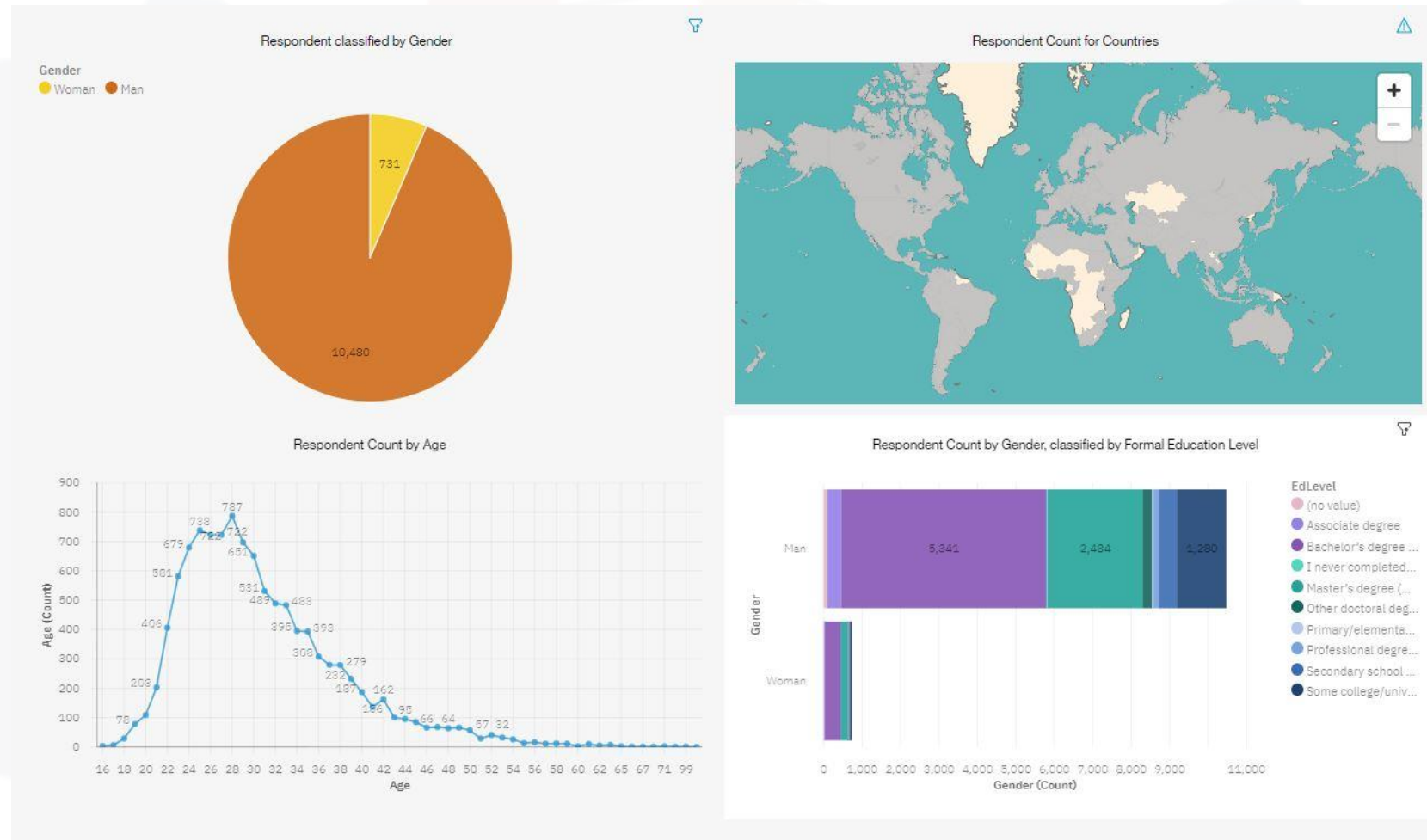
# Currently Technology Use



# Future Tech Trend



# Demography



# DISCUSSION

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•On the programming languages side, it is predicted that Python will rise from the 5th most common language to the 3rd language, are technology companies ready for this? Even though MySQL is the most common database today, developers predict that this order will change and MySQL will be replaced by PostgreSQL and MongoDB. How is the preparation of companies and employees for this comprehensive change in databases, and what will be the cost of this transition?



# OVERALL FINDINGS & IMPLICATIONS

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## Findings

- Considering the survey respondents, many of the "Developer" professions predict many changes in the male gender and industry and programming language.
- While the Python language is expected to become quite widespread, it is predicted that C++ will not be among the top 10 most used languages in the future.
- Employees predict that the database system will change. They think PostgreSQL and MongoDB will be the leading databases in the industry.

## Implications

- Companies should take seriously the expectation that both the prevalence of programming languages and databases will change in the long run in the industry. It should thoroughly question why employees think so and take steps for the benefit of the company.
- It turns out that some programming languages are more common and some less common and there is gender disparity. The sector's creation of female-based education classes specific to programming languages and databases, which will become widespread within the scope of both investment in the future and equality thoughts, may have a positive effect.



# CONCLUSION

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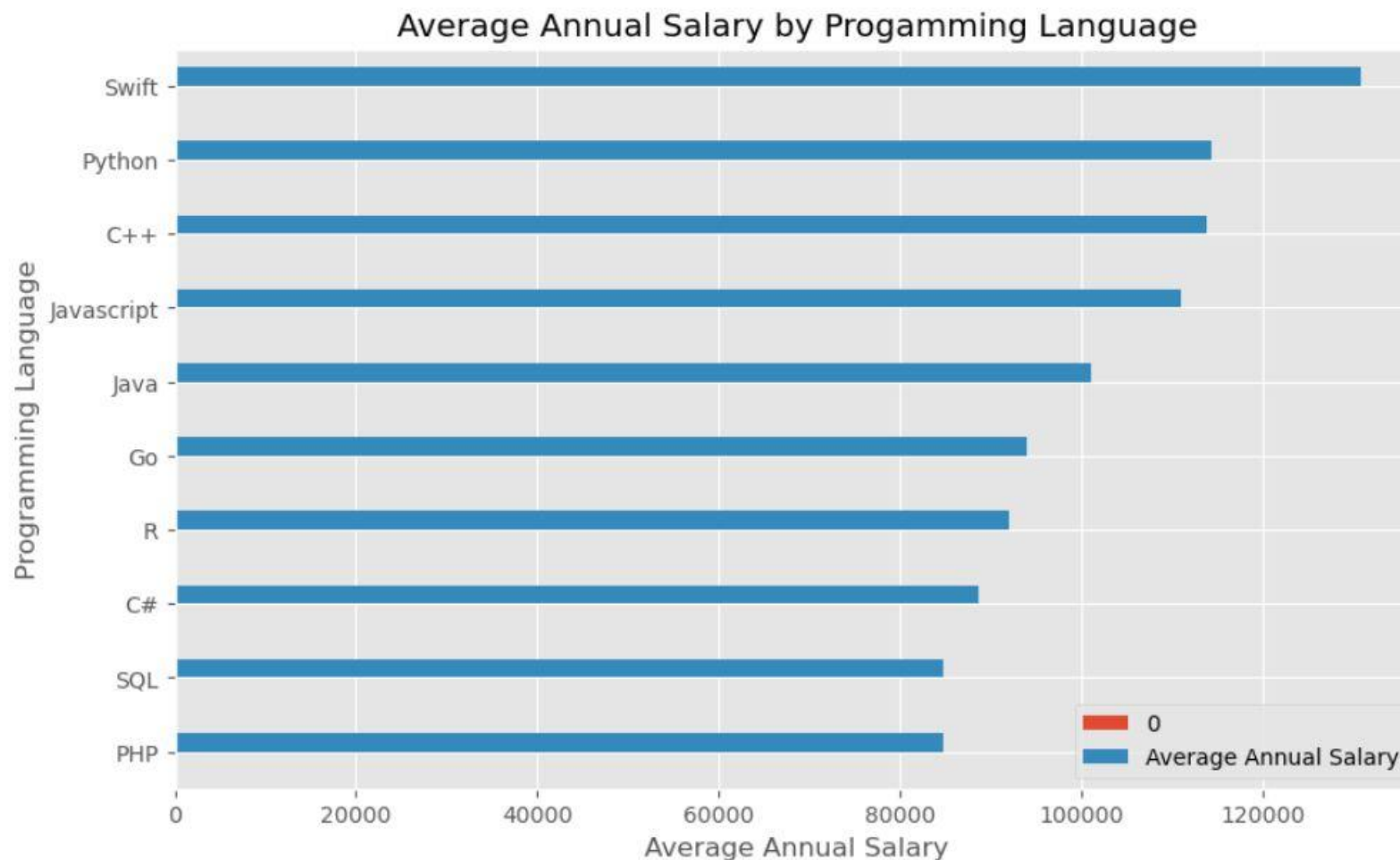
- The main purpose of the research is to measure the expectation of the prevalence of use of programming languages and databases that will be applied in the future.
- It seems that employees think that C++ will be replaced by C#.
- MySQL will be replaced by PostgreSQL and MongoDB.
- Although it is known how important Python is today, it is predicted that it will be in a more important place in the following years.

# APPENDIX



- The table of operating systems that are thought to be used in the future is interesting. It is expected that the most common operating systems in the coming years will be Linux, Docker and AWS, respectively. Companies need to try to understand why employees think this way and implement innovative approaches.

# Average Annual Salary



# MainBranch

