



# Developer Survey Findings

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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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- Summarizes key findings of analyzed data from the developer survey
- Insights
  - Most popular languages and databases (As of 2022)
  - Trend for future popular language
  - Demographics: age, gender
- These findings are relevant to aspiring programmers, educators or students

# INTRODUCTION

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- The objective of the annual survey is done to gather data regarding current usage and future trends
- Target Audience
  - Aspiring programmers
  - IT industry leaders
  - Students
  - Educators

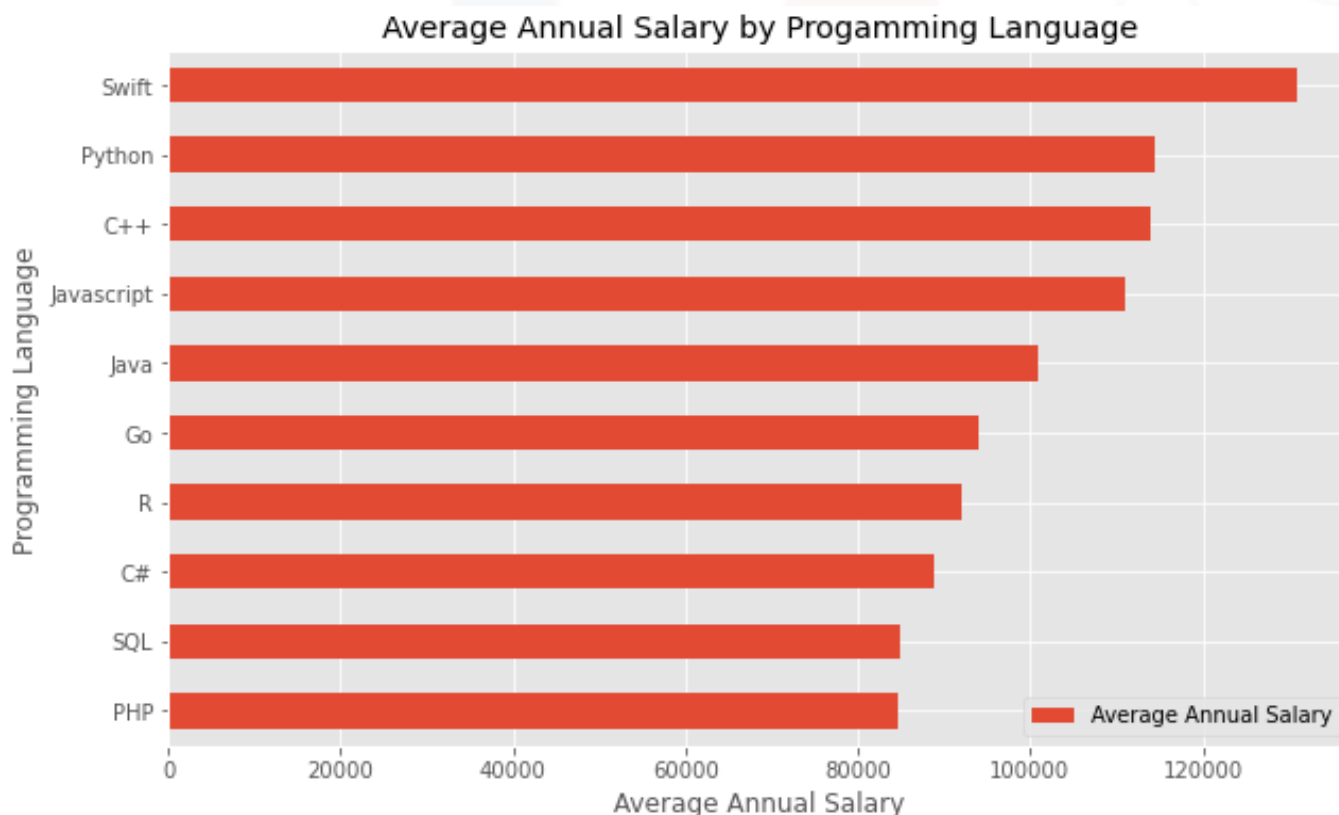
# METHODOLOGY

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- Data wrangling
  - Cleaned using SQL and Python
- Data visualization
  - Python &
  - IBM Cognos
- Data exploration
  - Databases, languages, platforms
  - Trend for current and next year
  - Demographics

# POPULAR LANGUAGES: Annual Salary

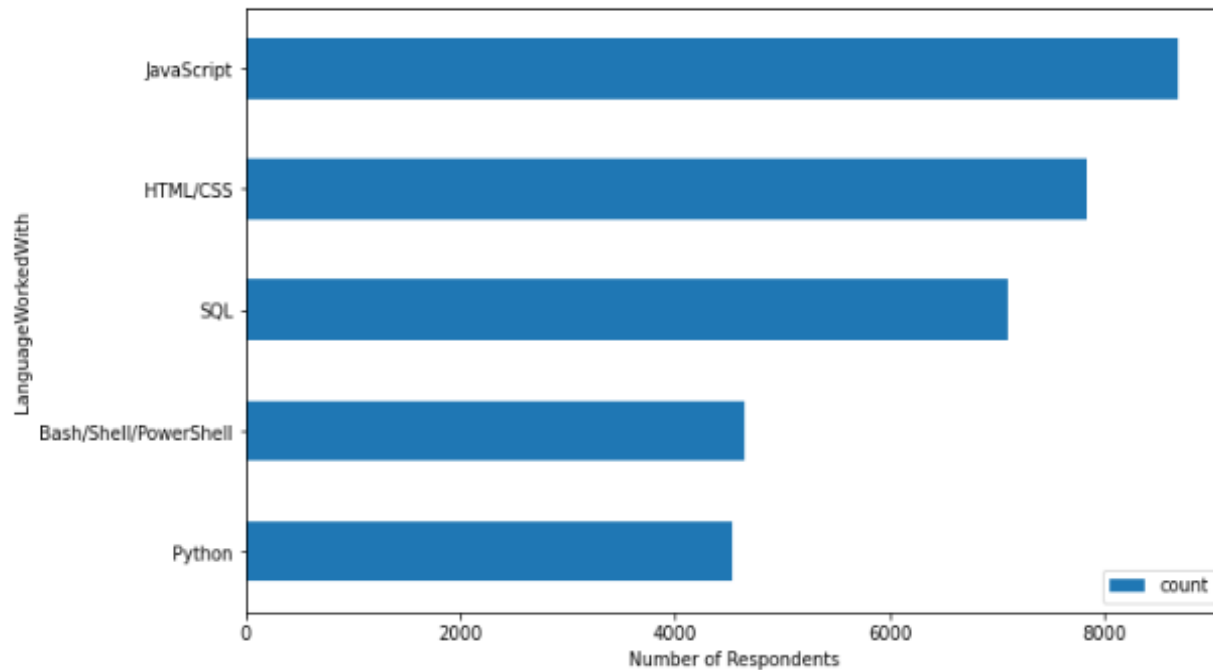


## Findings

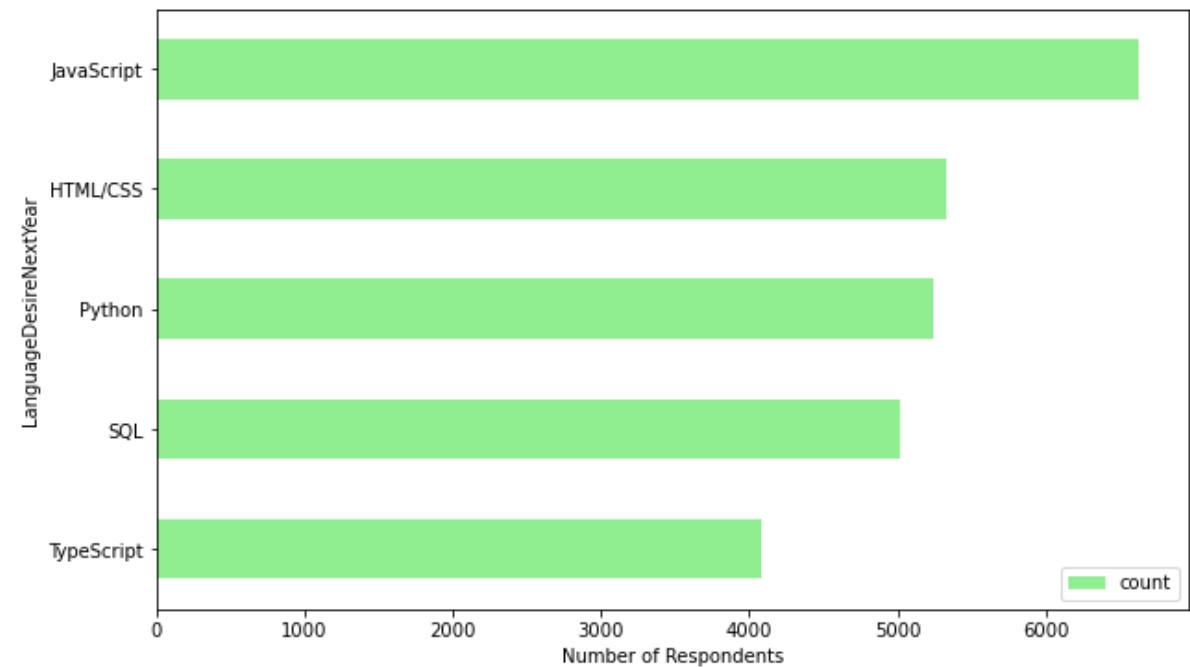
- Swift is the most highly paid language followed by Python, C++, JavaScript
- Does the compensation provided justify the popularity?

# PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- Shift of language usage to other types
- JavaScript remains as most popular language
- Huge growth towards Python and TypeScript

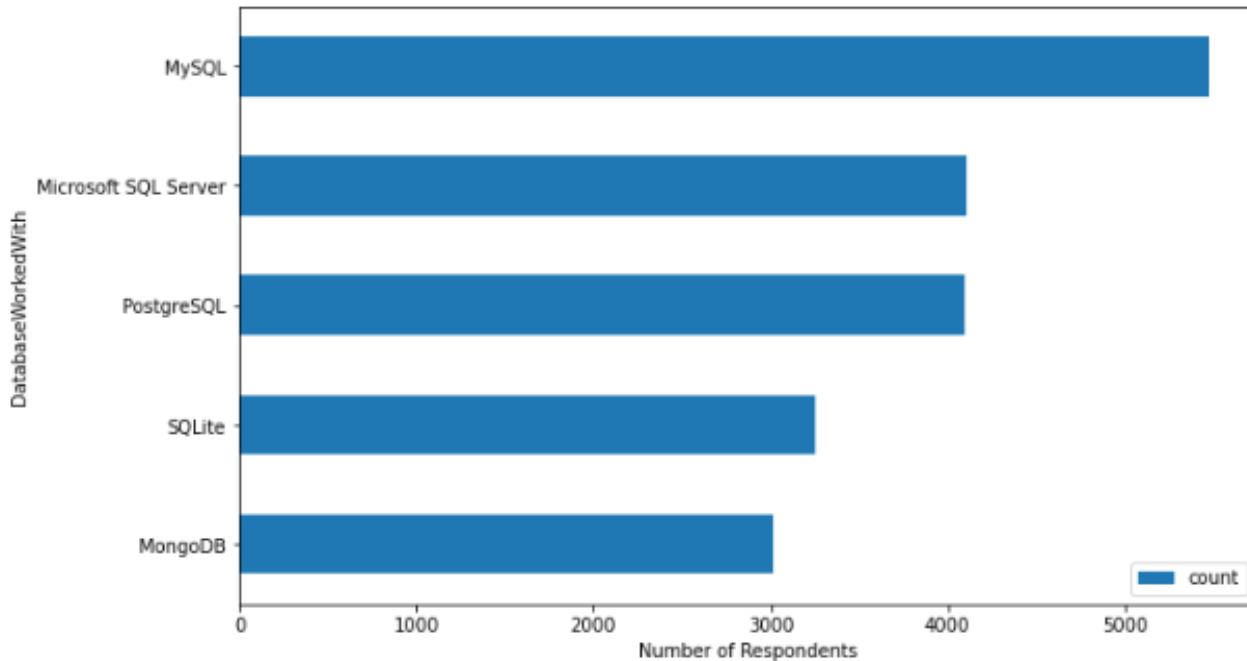
## Implications

- Web development is still in demand
- While SQL usage is lowered, it still is the preferred language for data storage
- Python's growth could be attributed from visualization or task automation

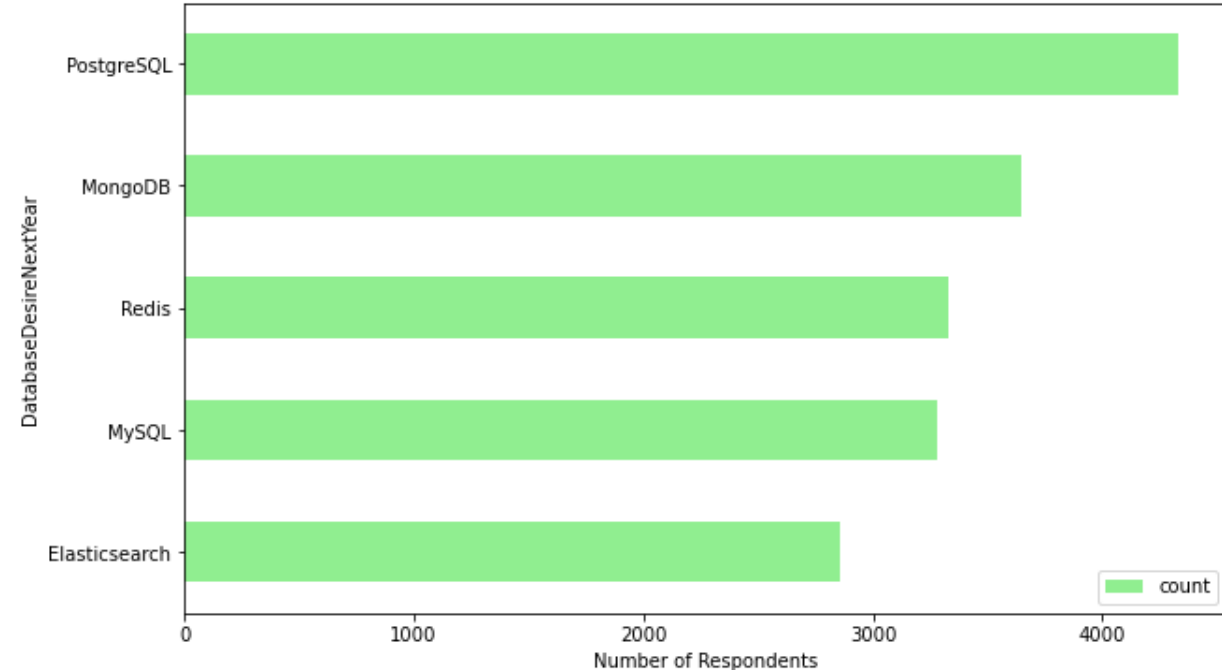


# DATABASE TRENDS

## Current Year



## Next Year



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- SQL is a dominant database language
- PostgreSQL overtook other database languages as the most in demand
- Redis and Elasticsearch gained some traction

## Implications

- Preference shift towards other types of open-source database language
- NoSQL are getting popular, possibly to address unstructured data
- There is a need to learn SQL and NoSQL due to trend shifting

# DASHBOARD

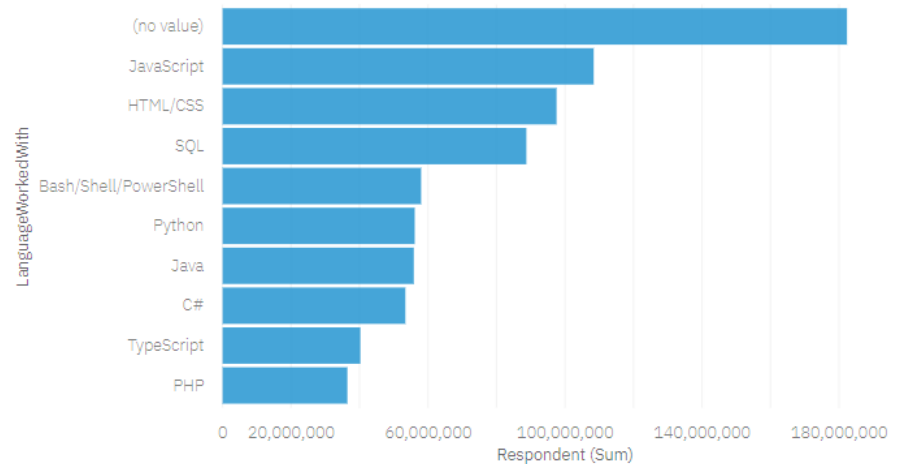
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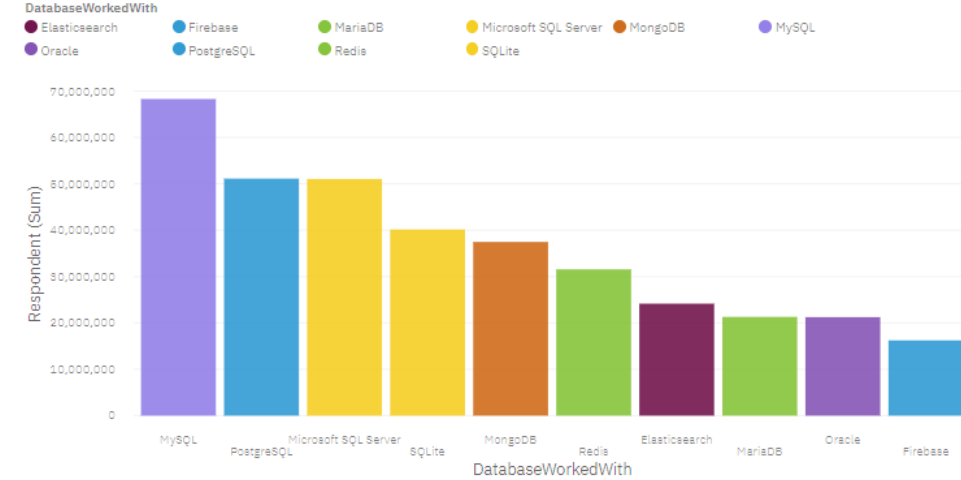
<https://dataplatform.cloud.ibm.com/dashboards/658a3b55-79d1-4ec9-ac0c-b140000a86ae/view/7735c61e3caa39e470b0e6e407cd2c052c62270be0bb8a55828c7b4909677397a86015c5c87b4e09d2145167fbbf1b5fcc>

# DASHBOARD: Current Usage

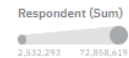
Trend of Languages Worked in 2022



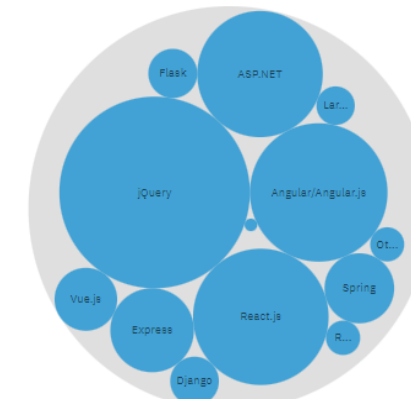
Trend of Database Worked in 2022



Platform Worked in 2022



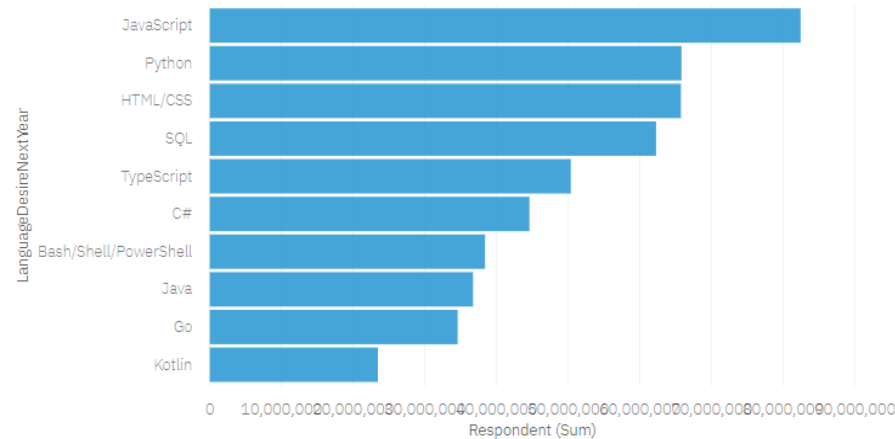
Web Frame Worked in 2022



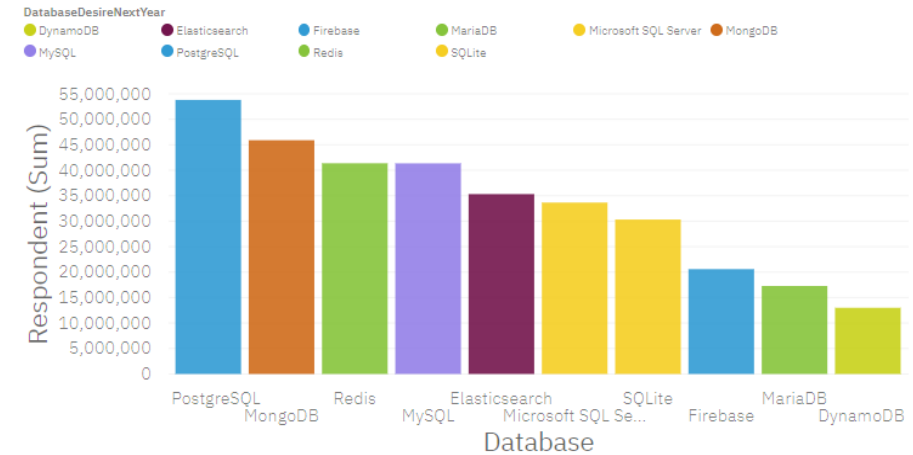
# DASHBOARD: Future Trend

Screen

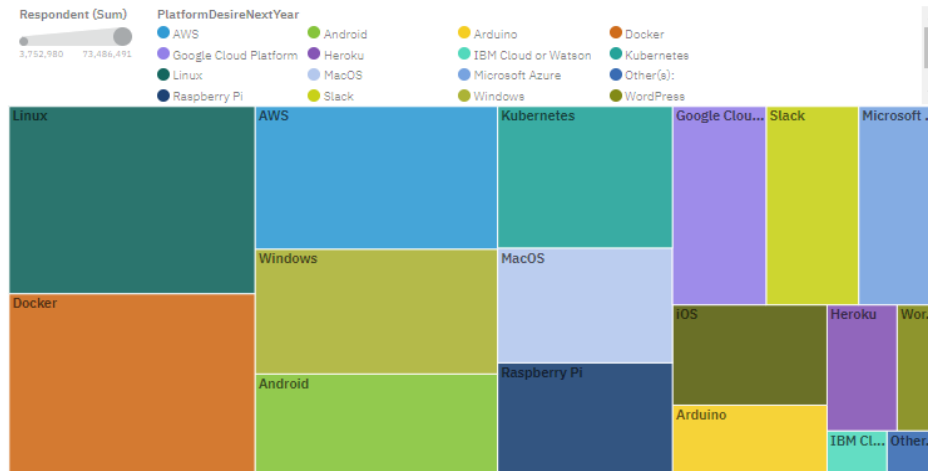
Desired Language Next Year



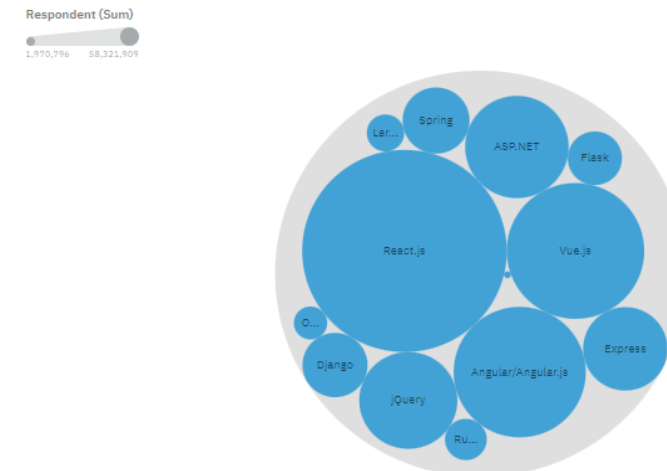
Desired Database Next Year



Desired Platform Next Year



Desired Webframe Next Year



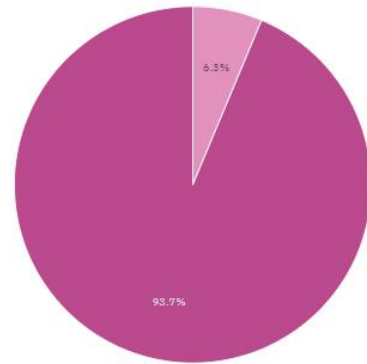
# DASHBOARD: Demographics

Screen

Man Vs Woman Respondent

Gender

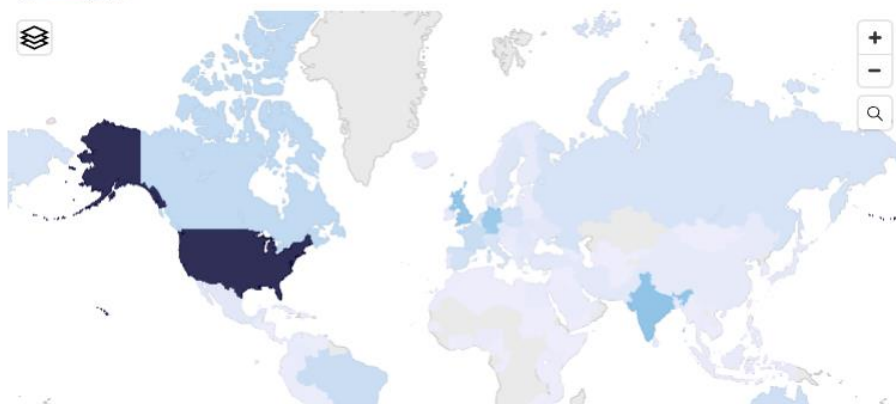
Woman Man



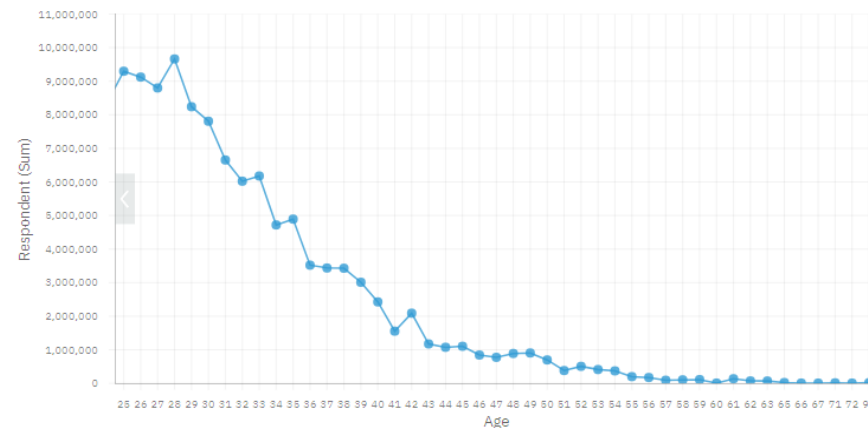
Respondent Count

Respondent (Sum)

865 10,215,212



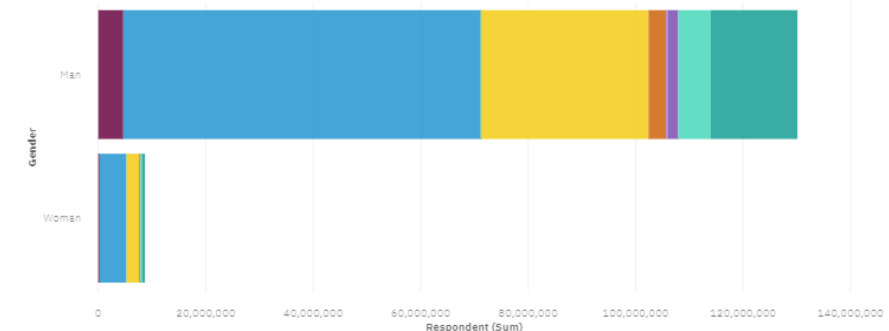
Age of Respondent



Education Level by Gender

EdLevel

Associate degree Bachelor's degree (BA, BS, B.E...) I never completed any formal ... Master's degree (MA, MS, M.E... Other doctoral degree (Ph.D, E... Primary/elementary school Professional degree (JD, MD, e... Secondary school (e.g. Americ... Some college/university study ...



# DISCUSSION

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- What are the top in demand languages?
- The emphasis on which language that should be taught in the upcoming years
- Distribution of annual salary for the developers

# OVERALL FINDINGS & IMPLICATIONS

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## Findings

- Swift were not in the top 5 languages despite high compensation. This suggest the lack of importance and usage as compared to popular languages used.
- Increasing trend in Python
- JavaScript and HTML/CSS remains dominant
- PostgreSQL is more desired in the next year
- Gender disparity in programmers despite slightly higher compensation for women
- Western countries are more into the technologies

## Implications

- Web development is still in high demand and aspiring programmers may opt for TypeScript instead of JavaScript
- Machine learning, AI development and data visualization might be the catalyst for learning SQL and Python
- Survey might be skewed towards western countries and lacked Asian counterparts
- Overall, learners need to adapt to changing needs from the world.
- More needs to be done to attract women to minimize the gender gap



# CONCLUSION

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- Data collected from developer survey was examined
- Findings into various insights of languages most desired by developers
- The Findings should still be relevant to developers and will need to continually upgrade to stay competitive as the trend changes
- Gender representation will need to be addressed

# APPENDIX

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- Include any relevant additional charts, or tables that you may have created during the analysis phase.

# GITHUB JOB POSTINGS

