



# Technologies Trend

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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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- Trends are pointing towards ABC technologies
  - AI Development: Python
  - Big Data: MongoDB, Redis
  - Cloud Development: JavaScript
- Unites States provide the most job opportunities for technicians
- Low-level programming languages continue to be in high demand, while high-level programming languages have a higher average salary

# INTRODUCTION

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- Explored the dynamic landscape of technology, focusing on several areas such as languages, web frame and more
- The rapid pace of technology change makes it challenging to keep up with the latest trends & popular technologies
- This report seeks to answer the following questions
  - Which technologies are currently the most popular, and how has their popularity changed?
  - What are the underlying implications?

# METHODOLOGY

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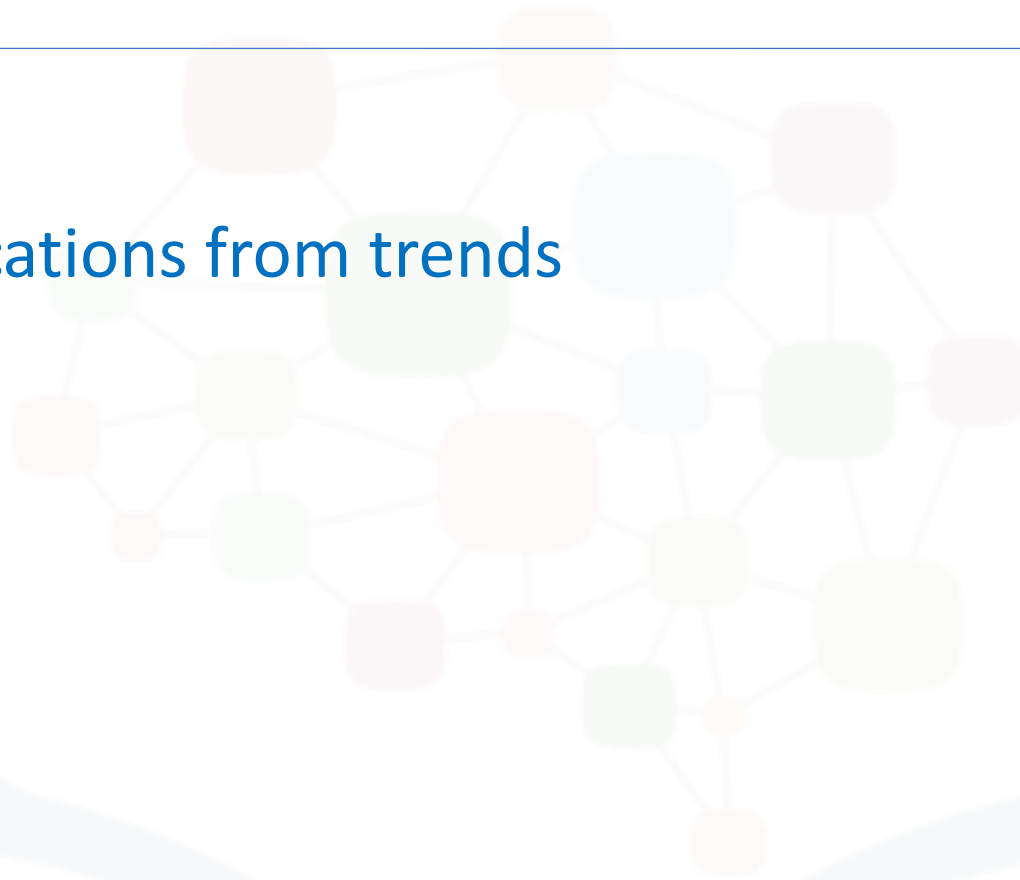


- Source: GitHub, Stack Overflow
- How was the data collected:
  - Using API
  - Webscraping
  - Accessing SQLite databases
- How was the data analyzed:
  - Creating visualizations
  - Creating data frames

# RESULTS

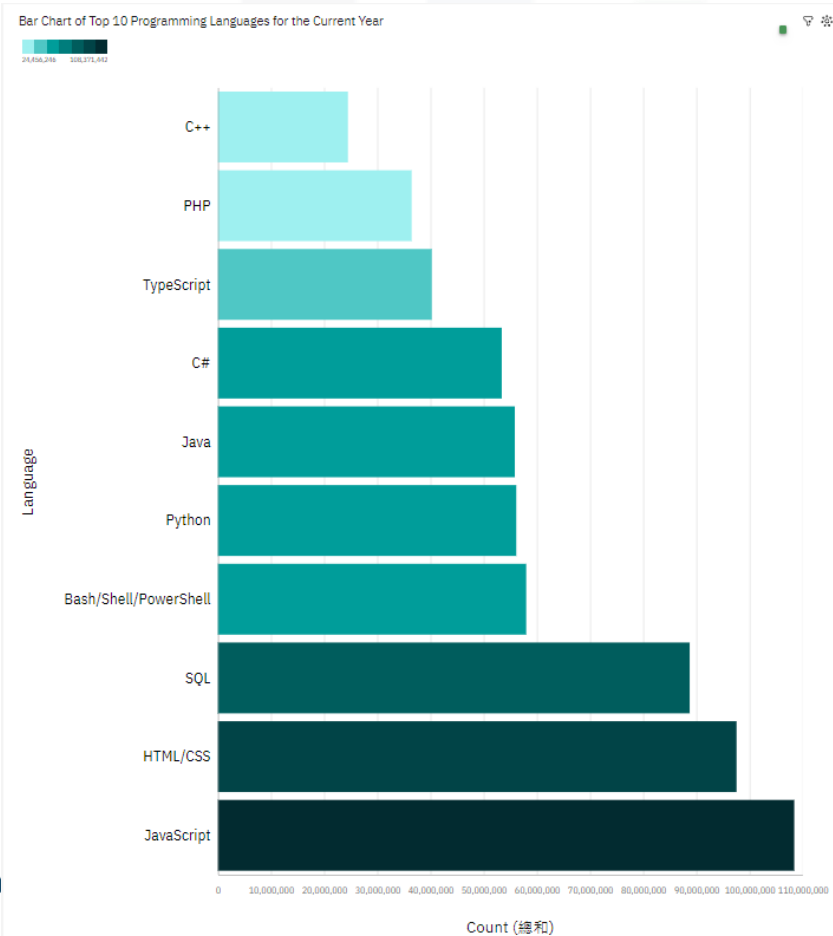
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- Findings & implications from trends

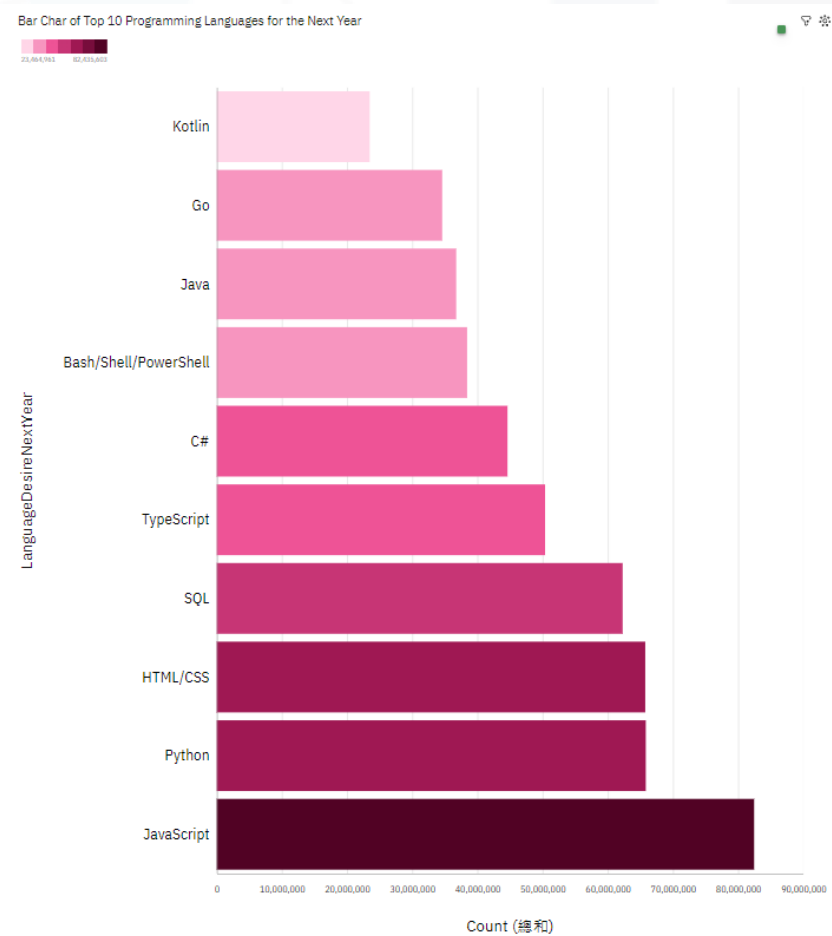


# PROGRAMMING LANGUAGE TRENDS

## Current Year



## Next Year



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- JavaScript is the most popular language
- Increasing desire to learn Python
- SQL is in top 5 for both years

## Implications

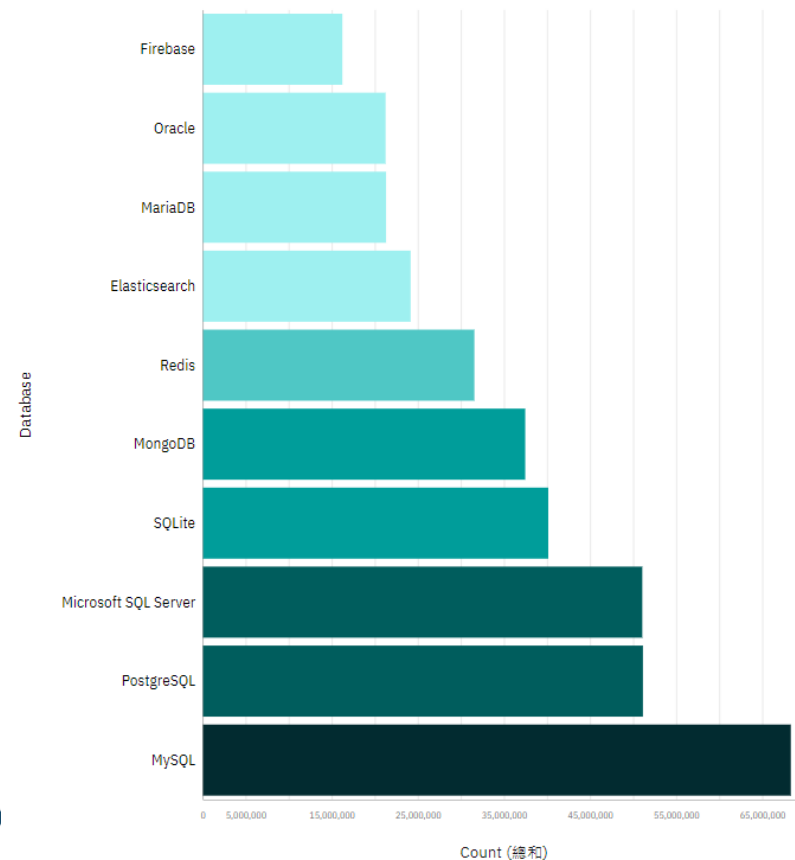
- High demand for JS programmer for web development and IoT
- Increasing demand for machine learning for AI development
- Remains crucial for data management and manipulation



# DATABASE TRENDS

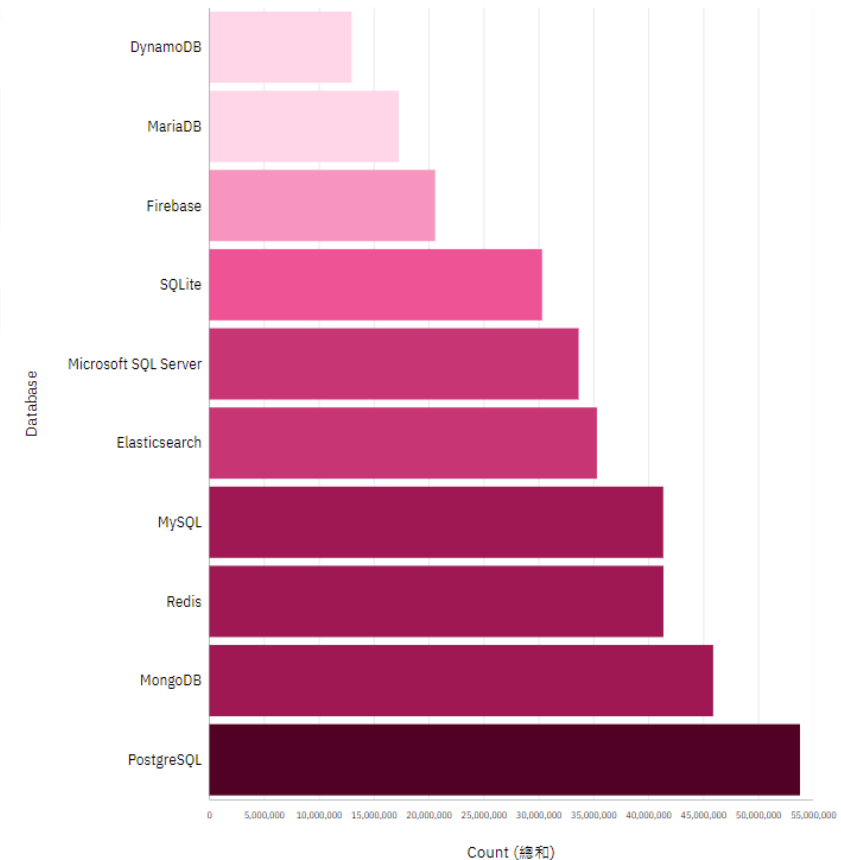
## Current Year

Bar Chart of Top 10 Databases for the Current Year



## Next Year

Bar Chart of Top 10 Databases for the Next Year



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- Desire to use MongoDB and Redis is increasing
- PostgreSQL is highly prioritized by users
- Desire to use traditional NDBMS (MySQL, SQLite) is decreasing

## Implications

- NoSQL databases are crucial for handling big data
- Being feature-rich while reliable is important for database users
- RDBMS has less flexibility and performance comparing to NoSQL

# DASHBOARD

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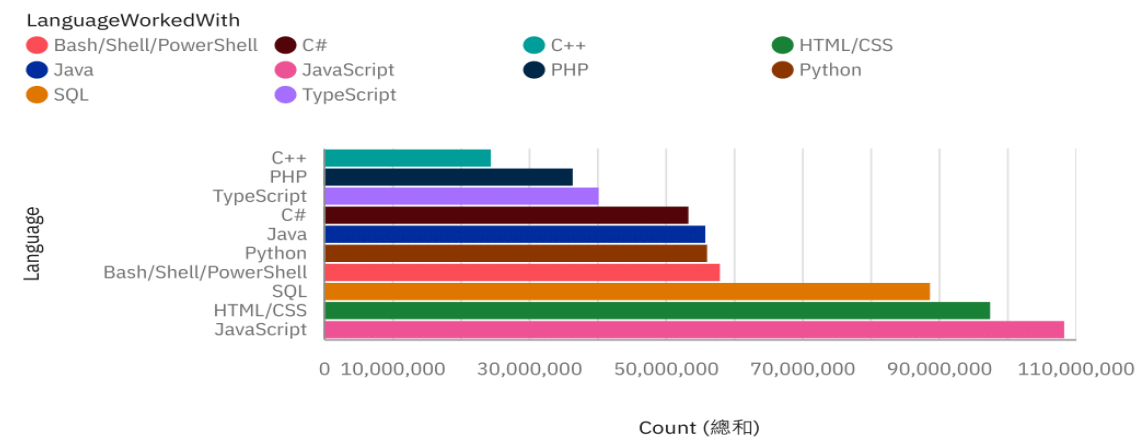


Scan the QR code or type the link below to view the Dashboard.

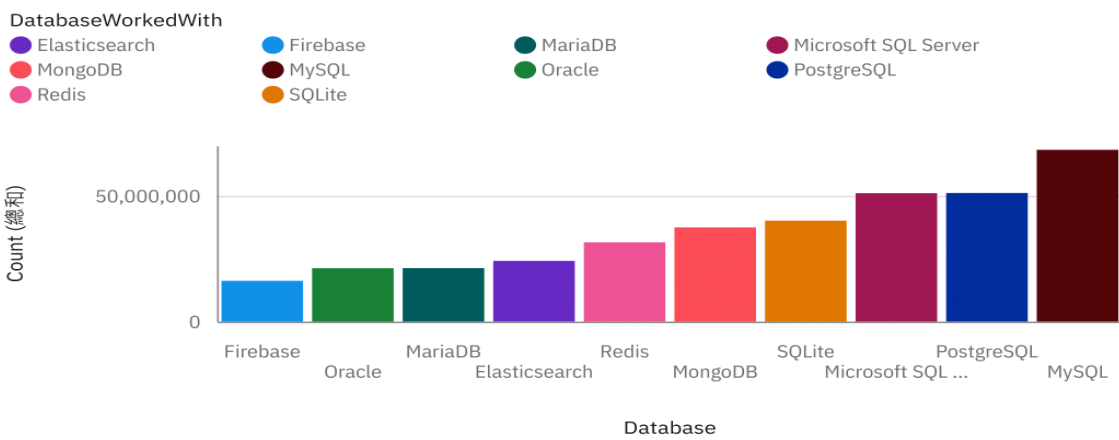
[https://ap2.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my\\_folders%2FDashBoard%255C&action=view&mode=dashboard&subView=model0000018ff7247591\\_0000000](https://ap2.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FDashBoard%255C&action=view&mode=dashboard&subView=model0000018ff7247591_0000000)

Current Technology Usage

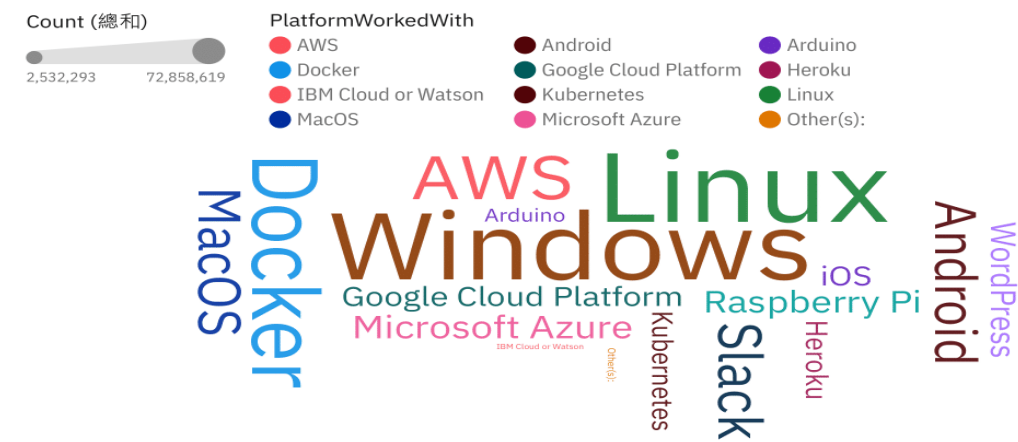
Top 10 Language Worked With



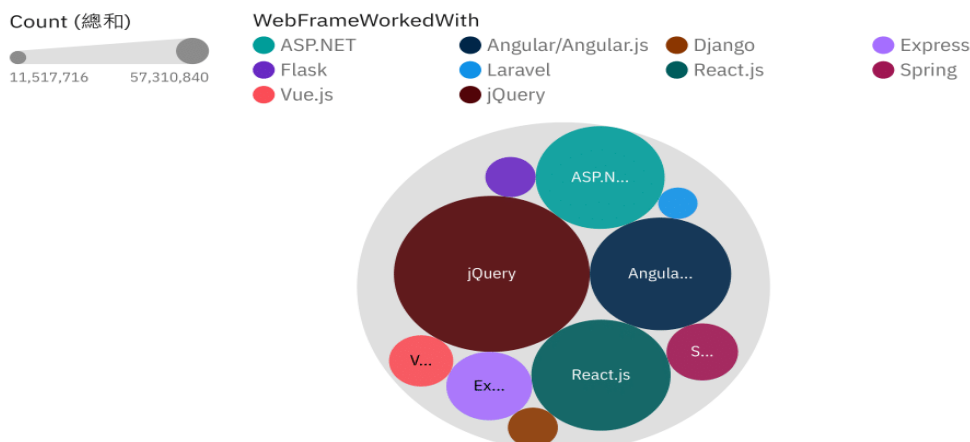
Top 10 Database Worked With



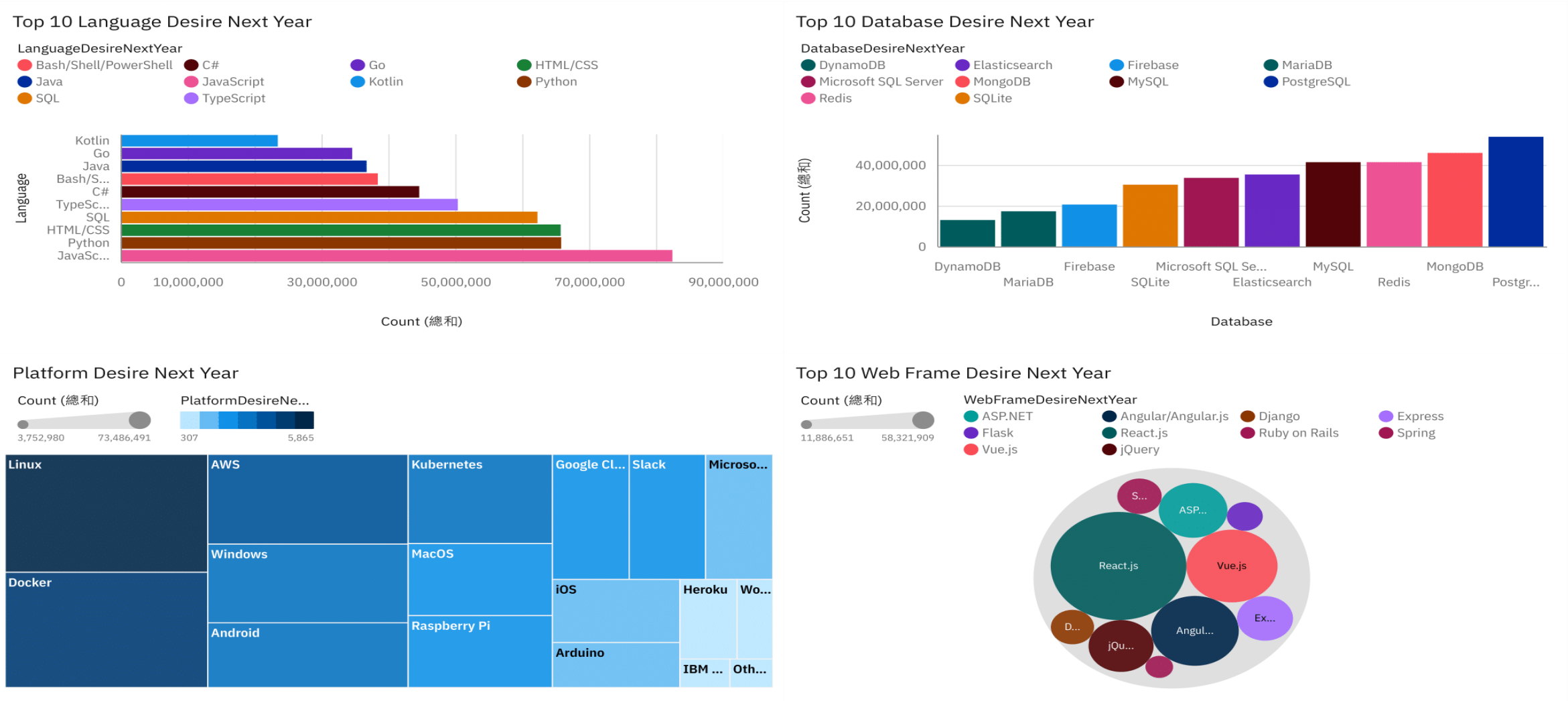
Platform Worked With



Top 10 Web Frame Worked With

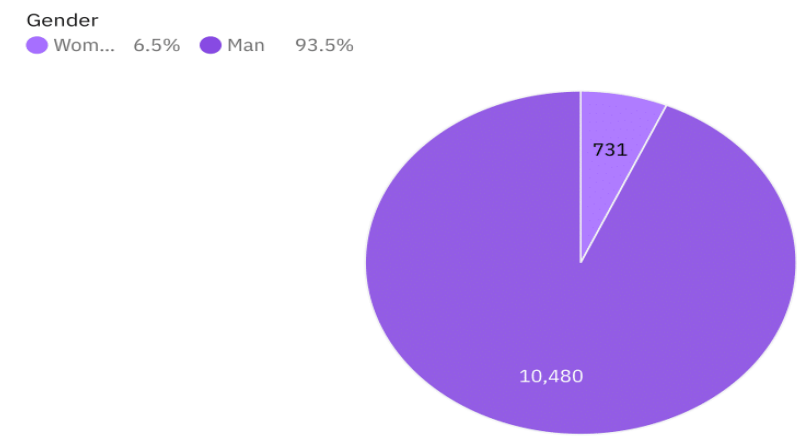


Future Technology Trend

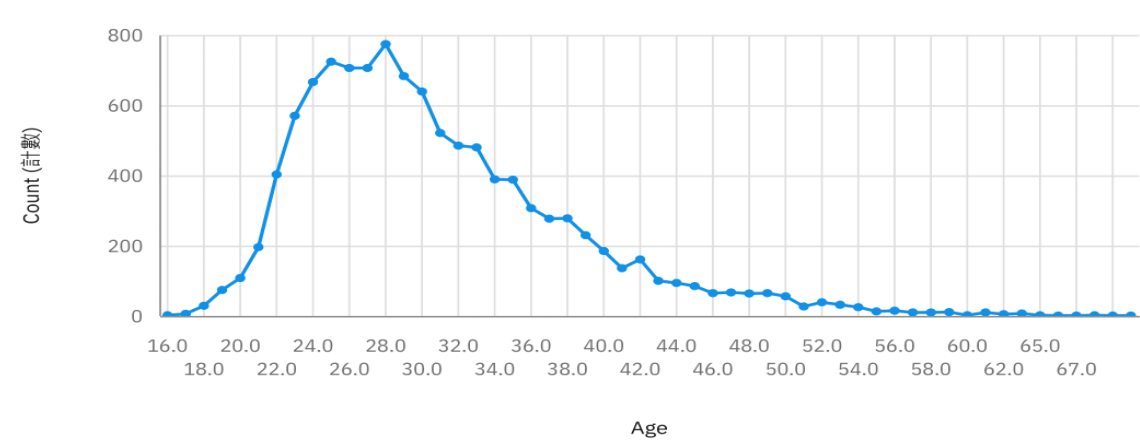


Demographics

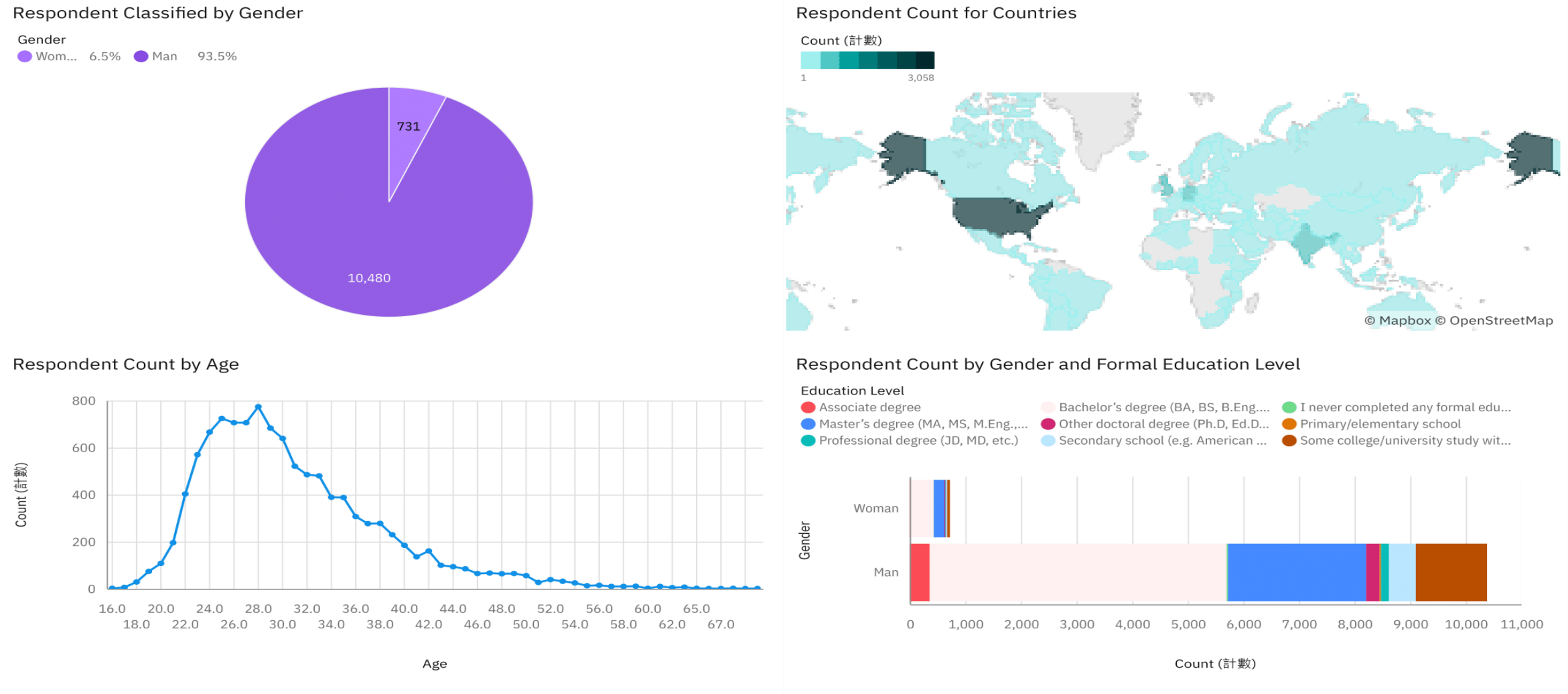
Respondent Classified by Gender



Respondent Count by Age



DASHBOARD TAB 3



# DISCUSSION

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- What options do technology specialists have if they want to stay on track with technology trends?

# OVERALL FINDINGS & IMPLICATIONS

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## Findings

- JS and Python will be the most popular languages
- Increasing users in NoSQL databases
- US has the highest number of technicians

## Implications

- JS is widely used in cloud development, Python is popular in machine learning
- NoSQL can better handle the vast amount of rapidly generated data today
- The working environment in the US is favorable for technology professionals



# CONCLUSION

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- The trends indicate that people are increasingly utilizing ABC technologies
- Know what to learn / work with
  - Learning ABC (AI, Big Data, Cloud) technologies is always a good idea
- Know where to work
  - Be cautious about where to find a job. See the appendix for more details

# APPENDIX

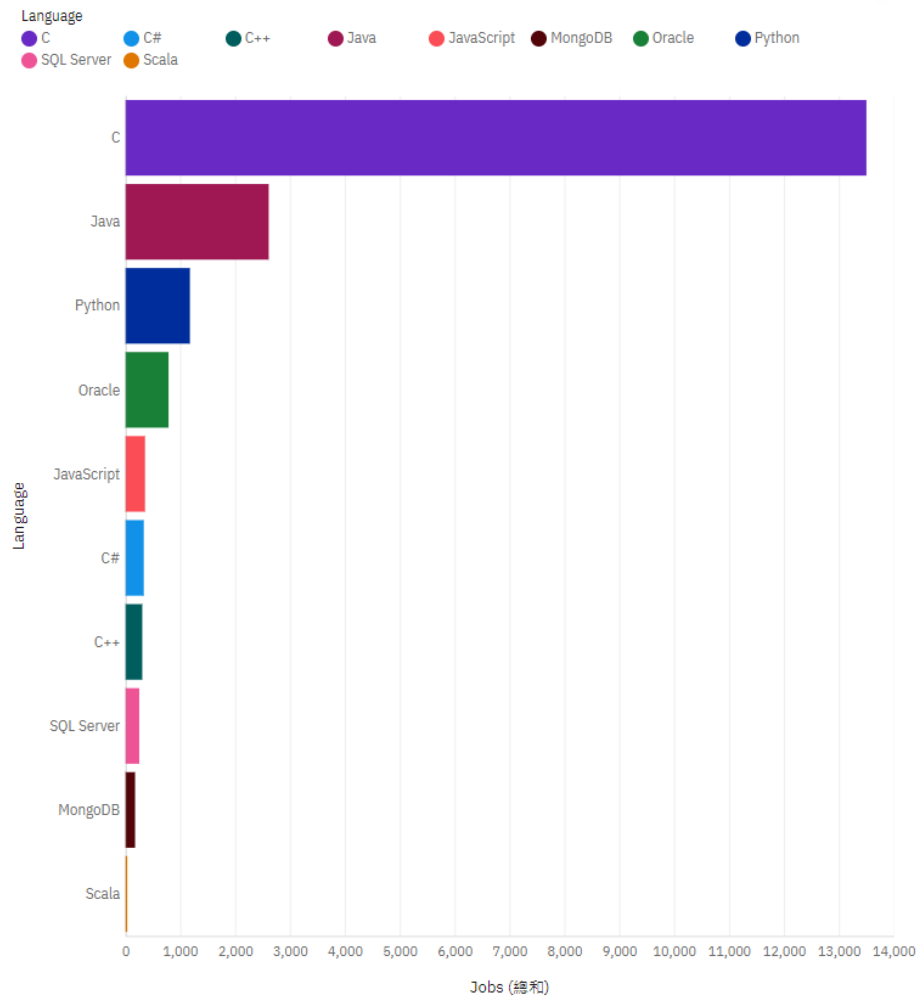
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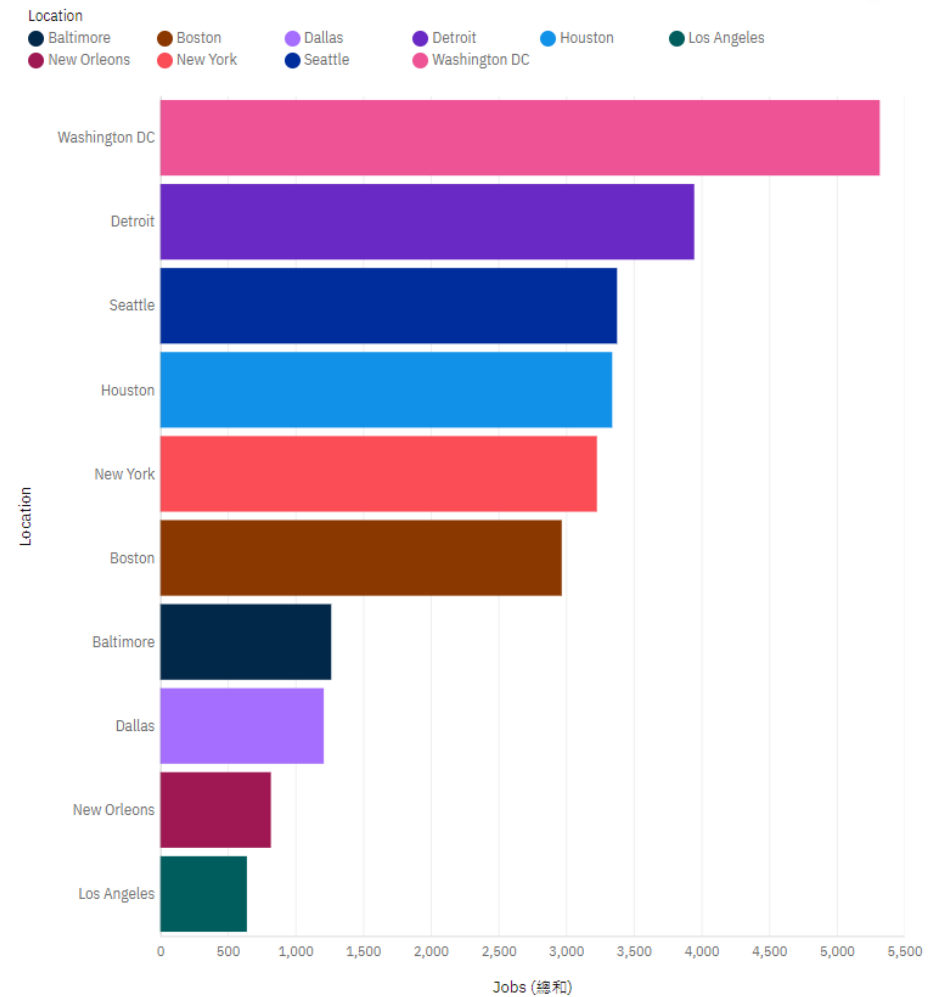
- What are the current demand and salary for different programming languages?

# JOB POSTINGS

Bar Chart of the Number of Job Postings by Language



Bar Chart of the Number of Job Postings by Location



# ANNUAL SALARY OF DIFFERENT LANGUAGES

