Technology Trends: Current vs Future

Rohit Dey

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OUTLINE

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

EXECUTIVE SUMMARY

- Trends in Technology:
  - Current popular languages, databases, platforms and frameworks
  - Desired languages, databases, platforms and frameworks
- Demographics:
  - Gender
  - Age
  - Location
- Results presentation supported with graphs and trends
- Discussion of overall findings
- Final conclusion

INTRODUCTION

- Stack Overflow's Annual Developer Survey is the largest and most comprehensive survey of people who code around the world.
- To keep pace of changing technology, programing is significant to expertise in IT solutions and consultants.
- This presentation is intended to analyze the current technologies used amongst developers and also the future technology trends.
- The focus problems are:
  - What are the programing/database skills at present?
  - What are the programing/database skills in the future?

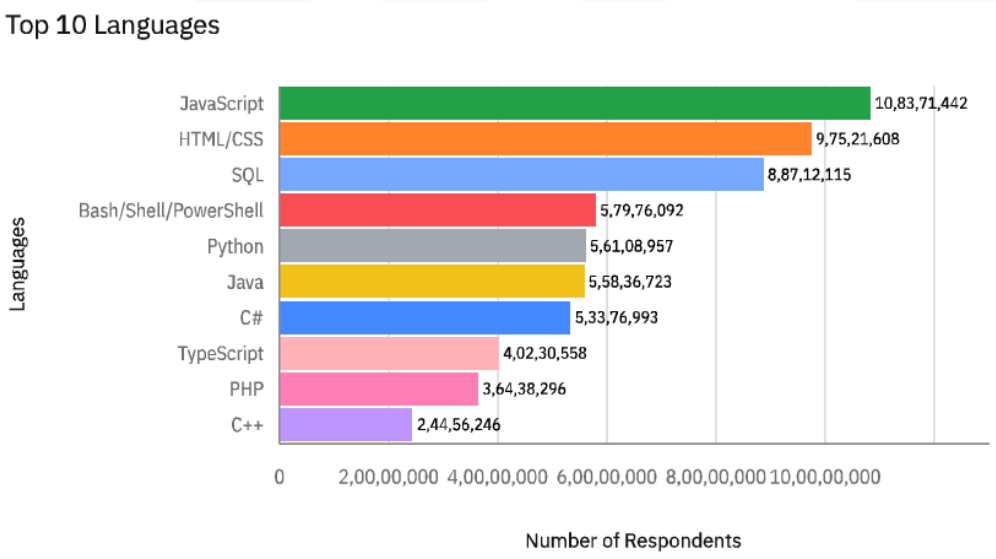
METHODOLOGY

- Data Collection Methods:
  - Web Scraping
  - APIs
  - Request library
- Data Wrangling
- Exploratory Data Analysis:
  - Analyzing data distribution
  - Handling outliers
  - Correlations
- Data Visualization:
  - Highlighting the distribution, relationships, composition and comparison of data
- Dashboard Creation:
  - IBM Cognos Analytics

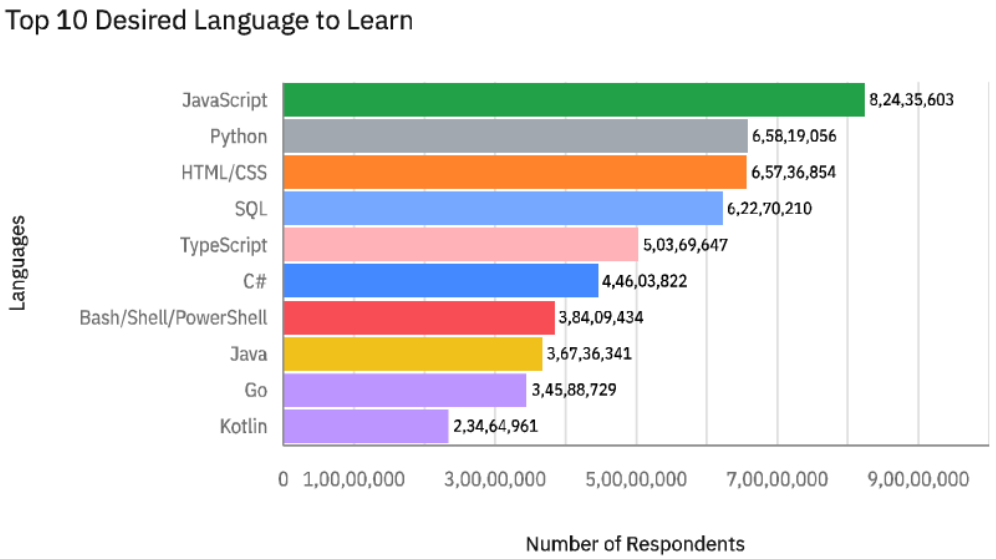
RESULTS

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

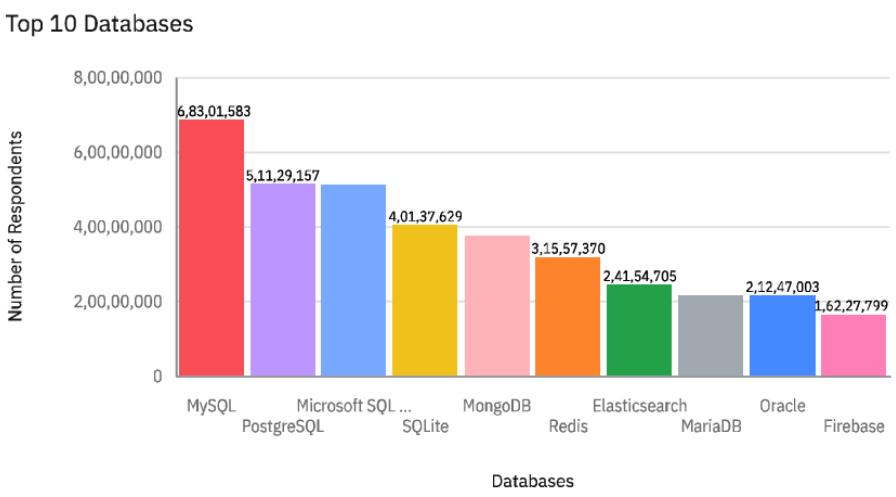
- Web development languages continue to be popular, e.g. JavaScript and HTML/CSS.
- Increased popularity in Python indicates a move towards Data Science, AI and Machine Learning.
- Great interest in TypeScript as it grows in future trends.

Implications

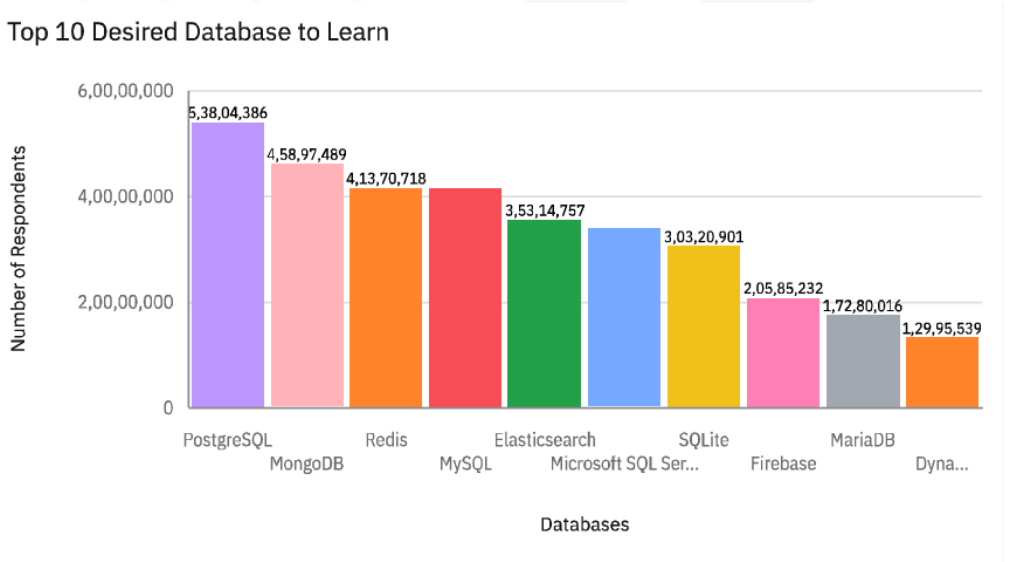
- JavaScript and HTML/CSS will be still in the trends.
- People will be more interested in Python.
- Possible developers might shift from JavaScript to TypeScript.

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- PostgreSQL is presented to be at the top instead of MySQL.
- MongoDB grows significantly to move to the second spot.
- There is no longer any significant interest in Oracle.

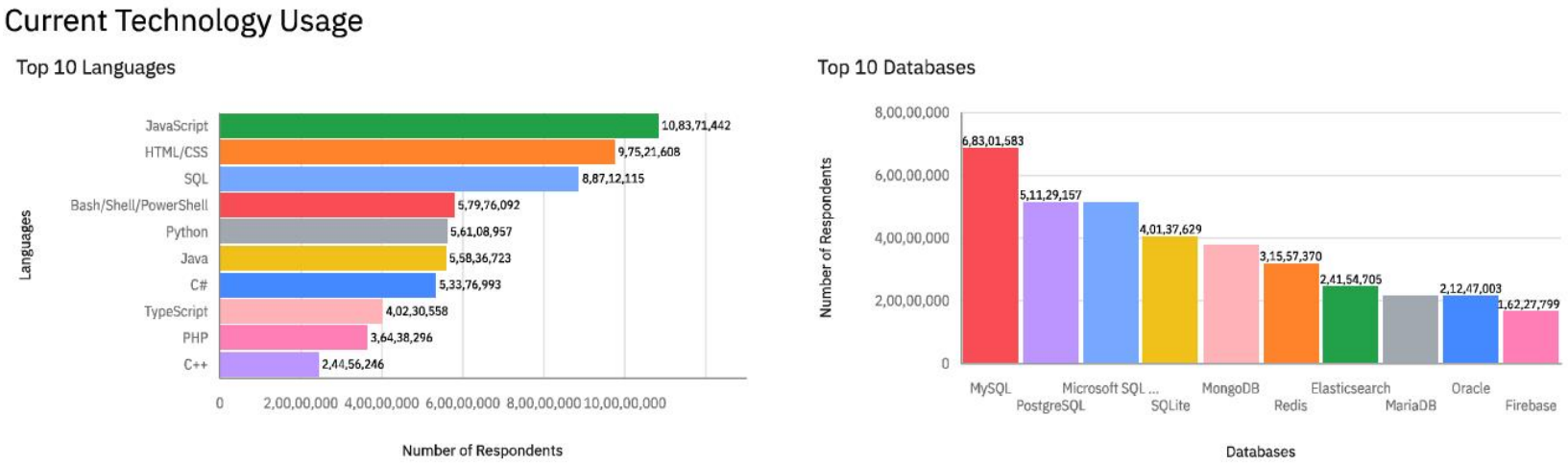
Implications

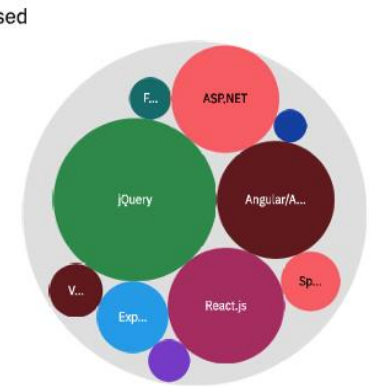
- Shift in investment from MySQL and Microsoft SQL Server to modern databases such as PostgreSQL, MongoDB and Redis.
- Developers using Oracle will suffer in getting hired because of Oracle's declining significance.

DASHBOARD

[IBM-Data-Analyst-Capstone-Project/Dashboards.pdf at main · RohitDeyx1118/IBM-Data-Analyst-Capstone-Project (github.com)]

DASHBOARD TAB 1

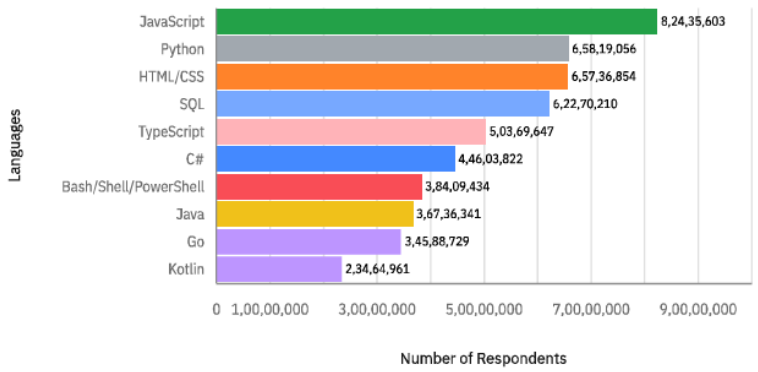




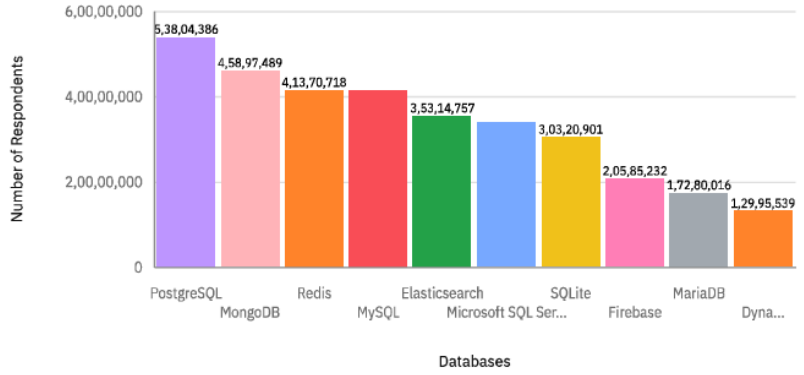
DASHBOARD TAB 2

Future Technology Trend

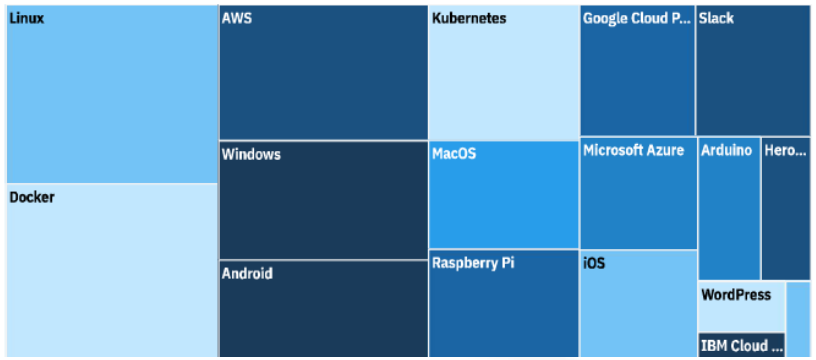
Top 10 Desired Language to Learn



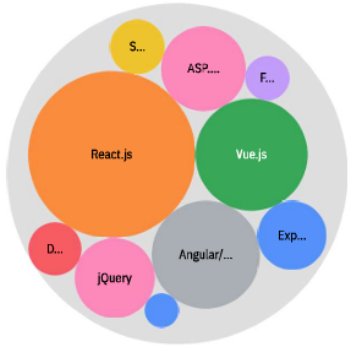
Top 10 Desired Database to Learn



Desired Platform Next Year



Desired WebFrame Next Year



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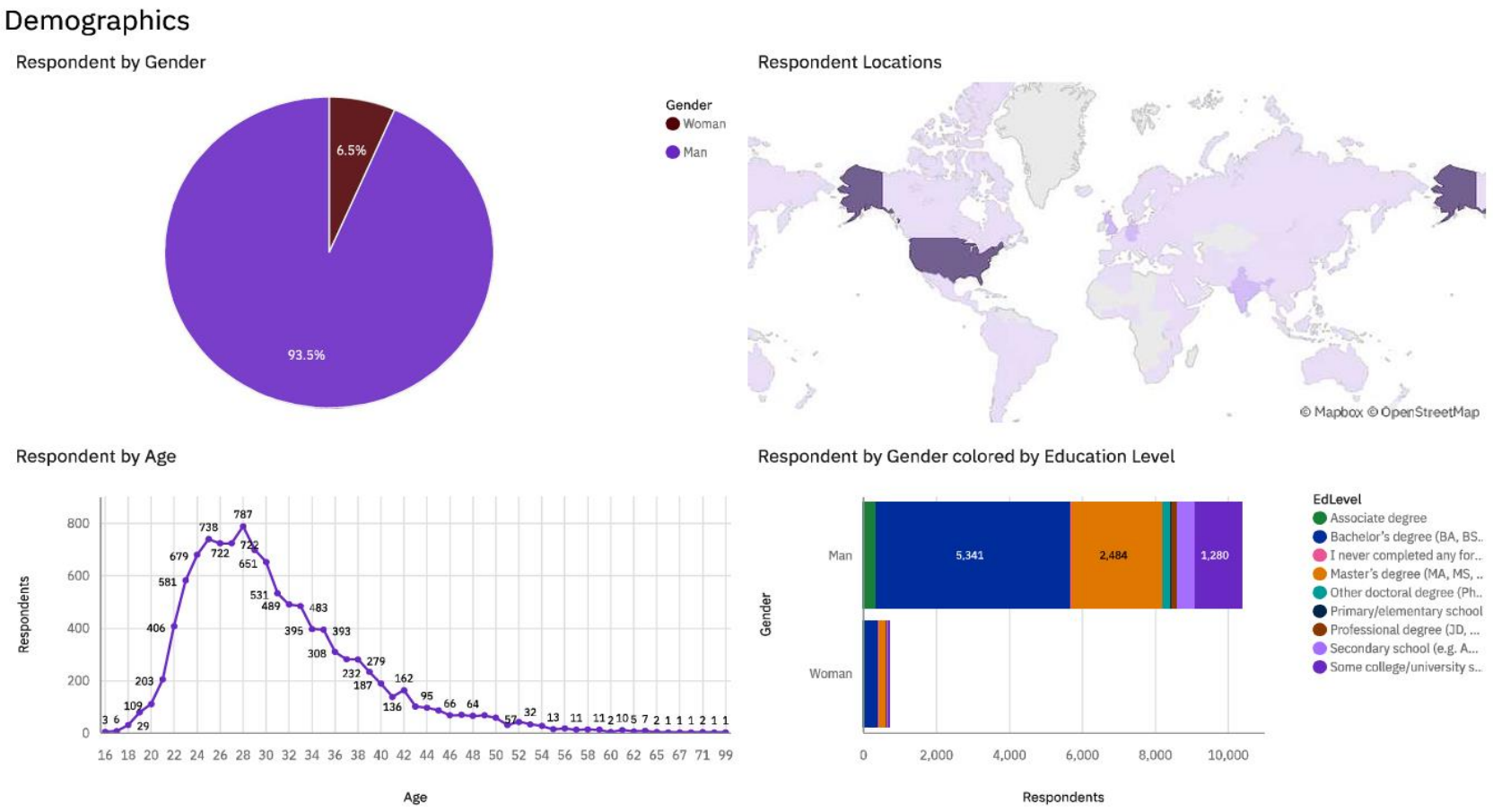


DISCUSSION

- Technology trends
- Why the SQL servers remain the most trending in the future?
- Demographics of developers

OVERALL FINDINGS & IMPLICATIONS

Findings

- JavaScript is the most popular programming language.
- While SQL is going to be surpassed by Python, Bash/Shell/PowerShell are not shown in the next year.
- PostgreSQL is presented as 1st place instead of MySQL.
- Wide gender disparity in developers with 93.5% being men, and only 6.5% women.

Implications

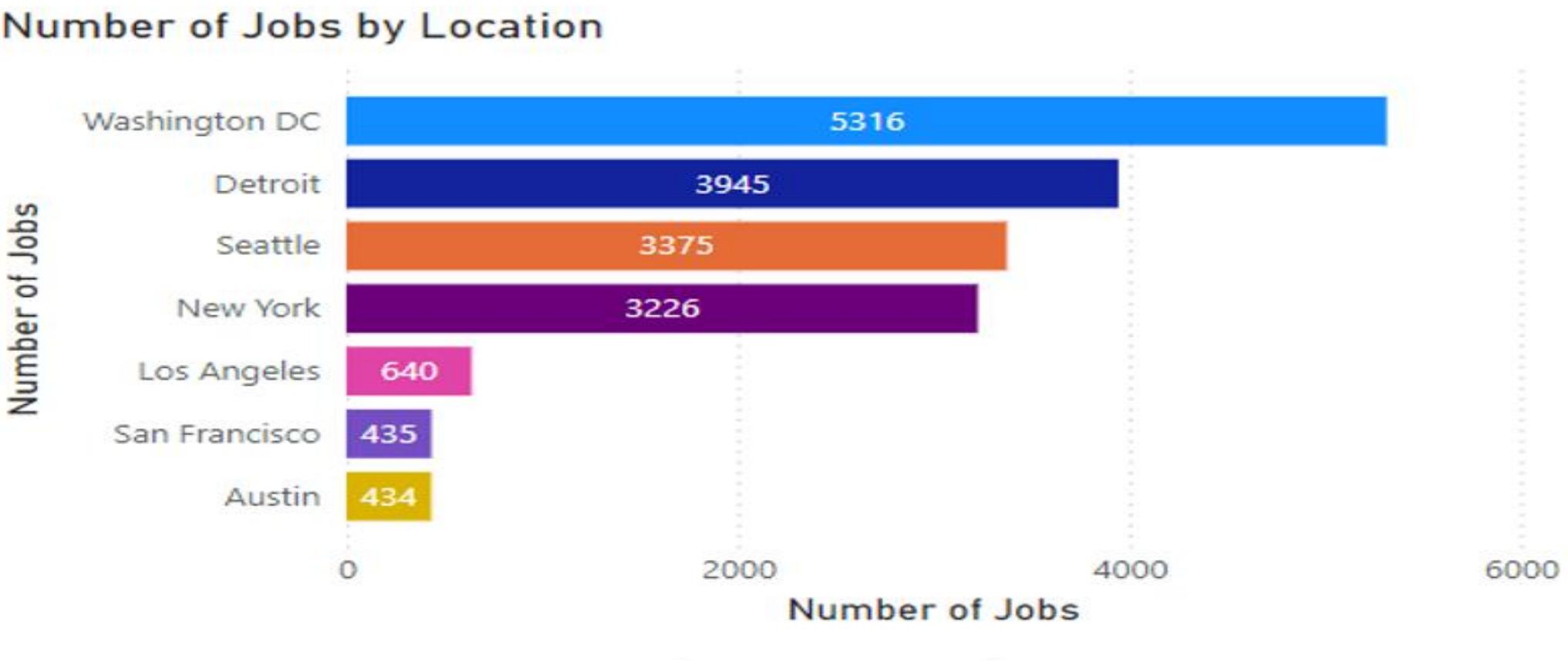
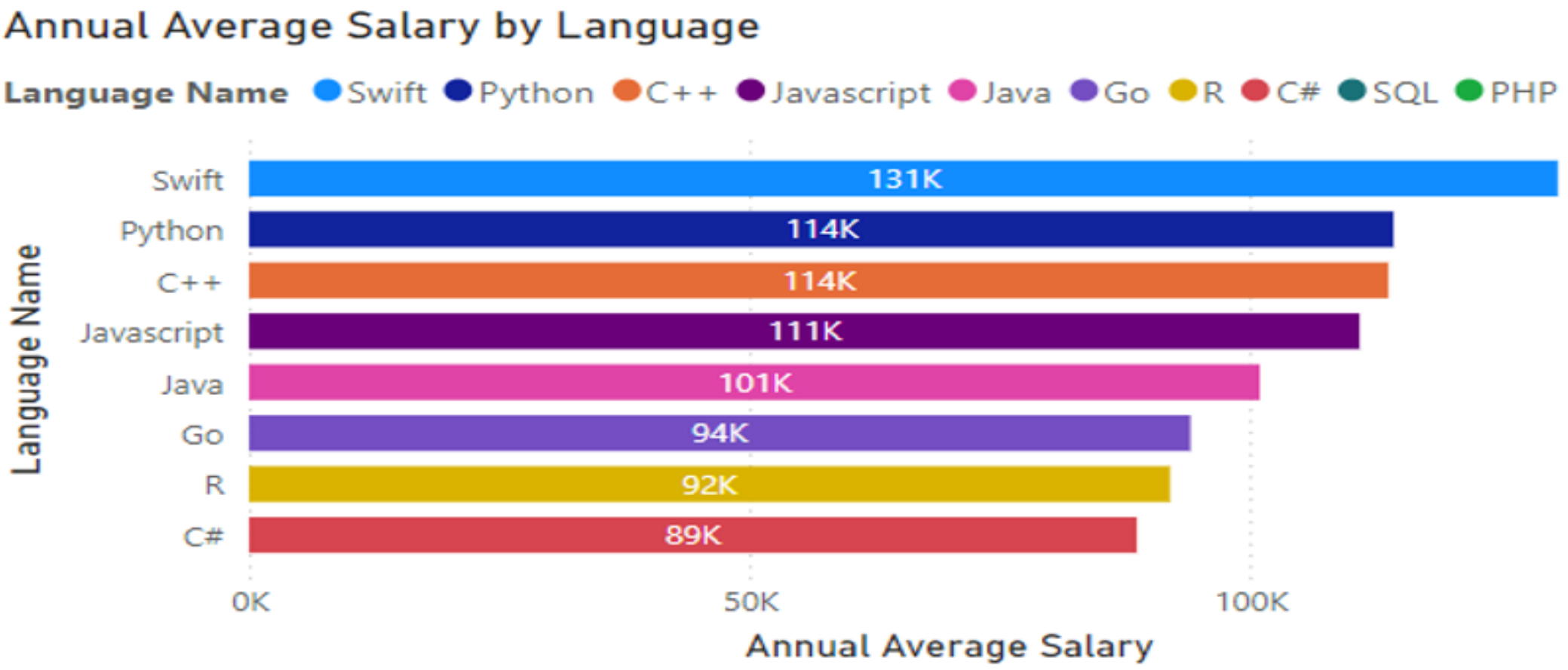
- JavaScript and TypeScript web frames gaining more and more users.
- The most popular database is expected to be PostgreSQL.
- Global polarization of developers location and gender.
- Intentional investments to be made in getting more women involved in software development.

CONCLUSION

- JavaScript and HTML/CSS is estimated to stay popular the same in the next year.
- Python will be the most preferred language after JavaScript.
- PostgreSQL will be the most demanding database.
- Over 90% young male developers.
- Get more women into the tech and software development space.

APPENDIX

JOB POSTINGS



POPULAR LANGUAGES