Trends and Demographics of Programming

Mark Fairchild

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OUTLINE

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EXECUTIVE SUMMARY

- Several current trends were identified
- The most popular languages were
  - Javascript
  - HTML/CSS
  - SQL
- The most popular database was MySQL
- The most popular platforms were
  - Linux
  - Windows
  - Docker
- The most popular WebFrame was JQuery

INTRODUCTION

- Being aware of trends in software development is important for data analysts and programmers.

- The demographics of the software development field must be understood by anyone in a position to do hiring for software development or data analysis roles.

- Changes in database popularity point to larger trends in the technology ecosystem.
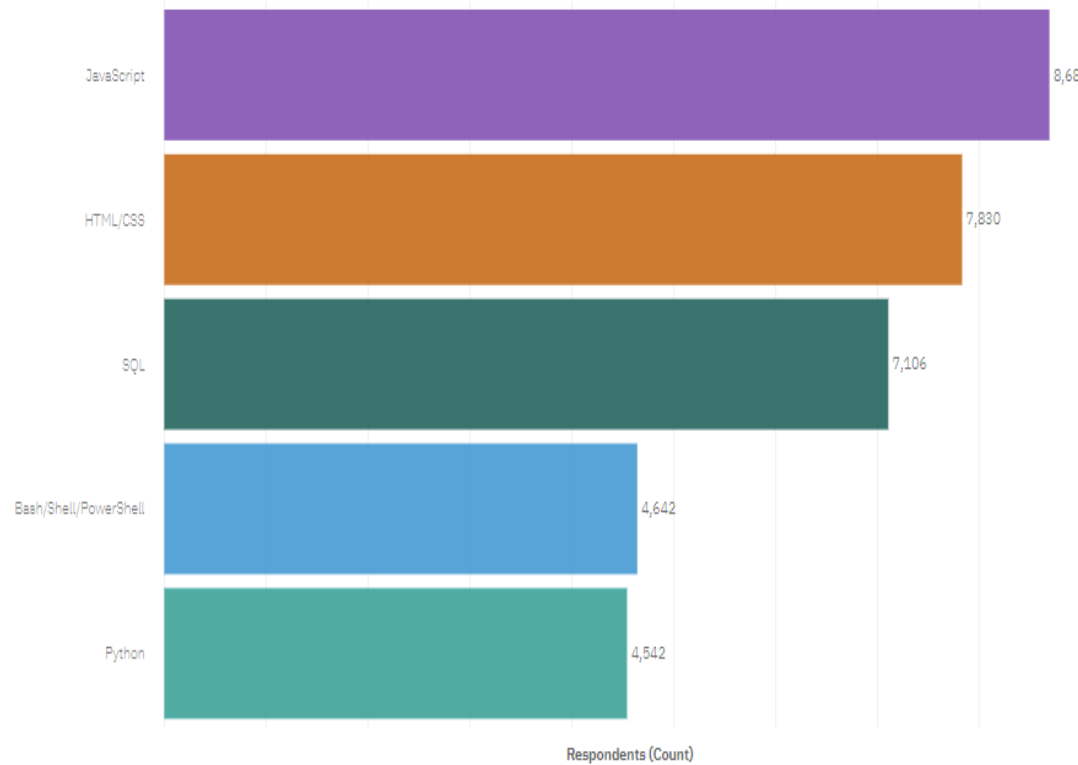
METHODOLOGY

- Dataset came from the 2019 StackOverflow Developer Survey (obtained under an ODbL: Open Database License).

- A filtered subset of the data provided by Coursera Online was used in the analysis.

- Visuals were produced using IBM Cognos Analytics.

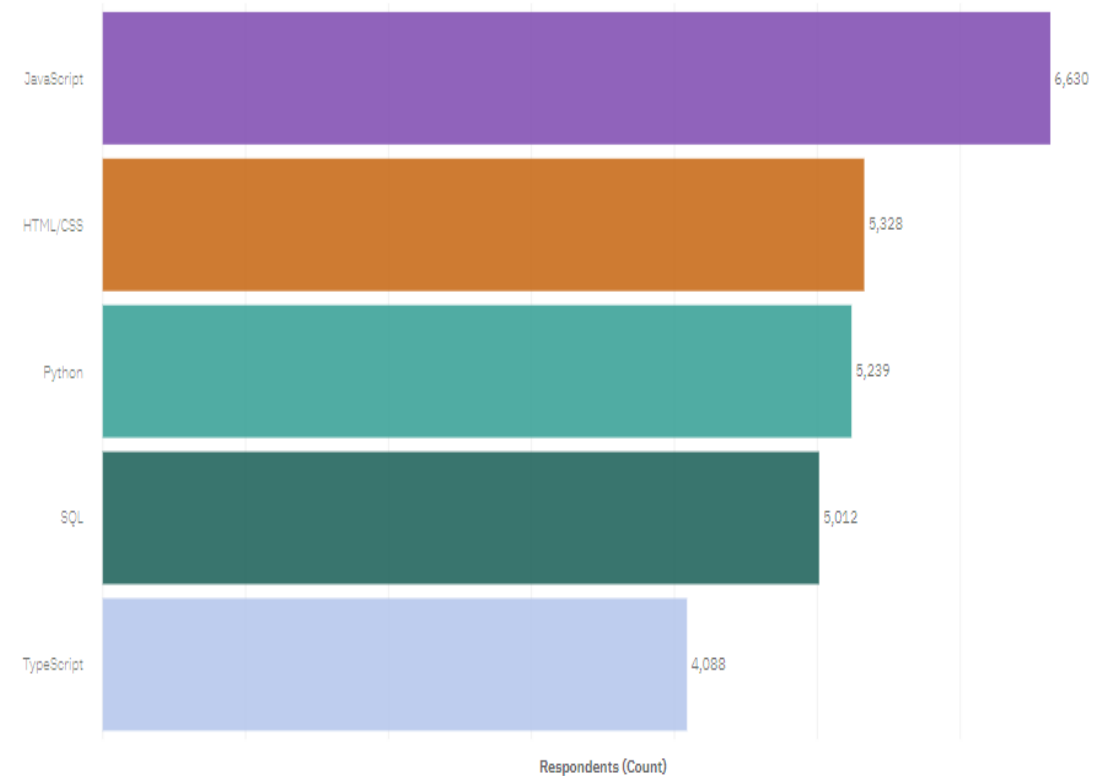- The full dashboard is available at this link (until January 2023)

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RESULTS

PROGRAMMING LANGUAGE TRENDS

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS
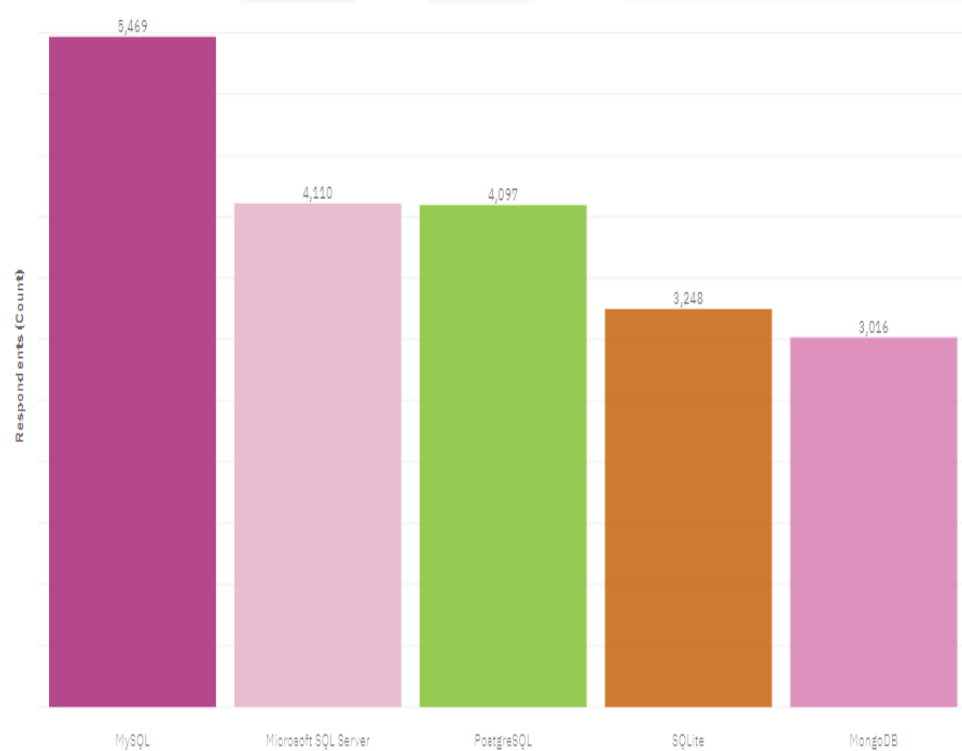
Findings

- JavaScript, HTML/CSS, and SQL were the most popular languages in 2019.

- JavaScript, HTML/CSS, and Python were expected to be the most popular languages of 2020.
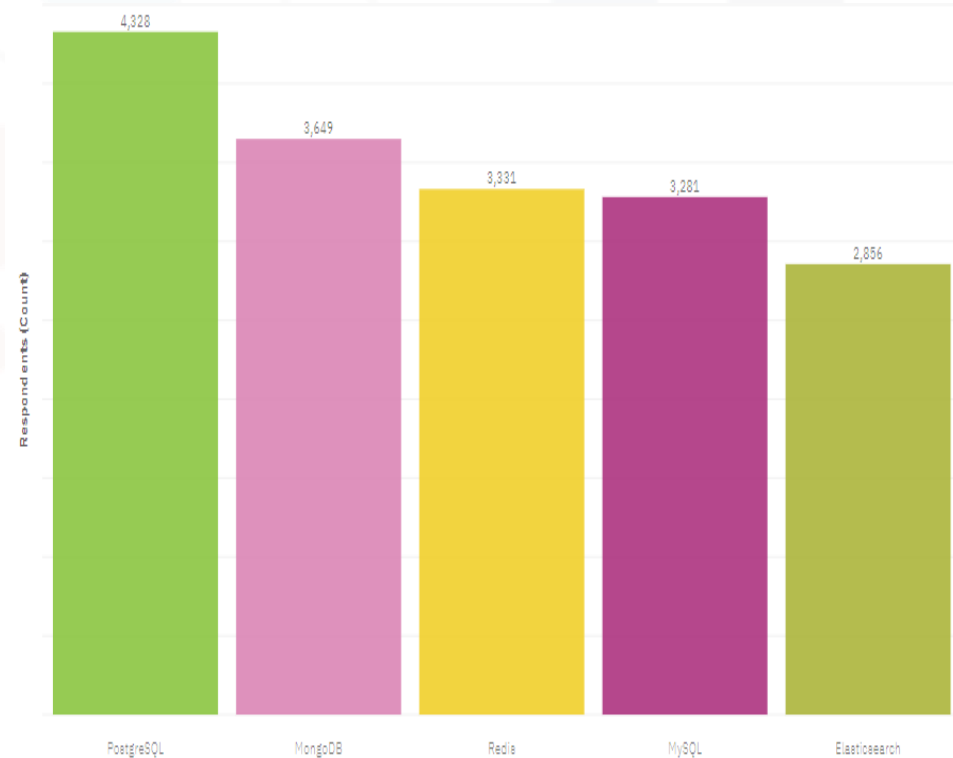
Implications

- Web development with JavaScript and HTML/CSS continues to dominate software development.

- Python is rapidly becoming one of the most popular development languages.

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DATABASE TRENDS

Current Year

Next Year

DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- PostGreSQL was 3rd in 2019 but expected to rise to 1st in 2020.

- MongoDB was 5th but expected to rise to 2nd.

- MySQL was 1st but expected to drop to 4th.

- Microsoft SQL Server was 2nd but expected to drop out of the top 5 entirely.
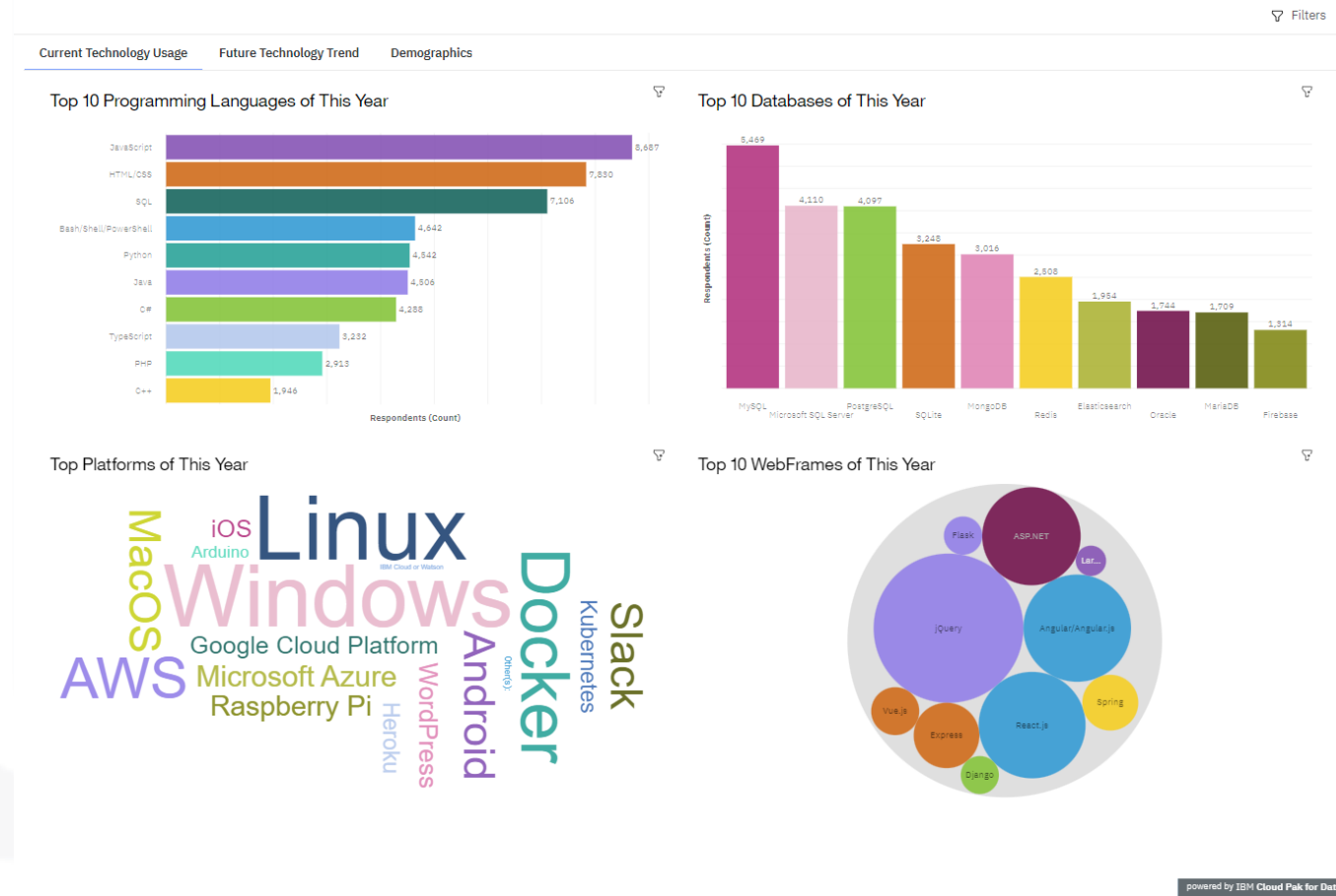
Implications

- Traditional SQL relational databases are declining in popularity compared to *NoSQL* DBs like MongoDB and Redis.

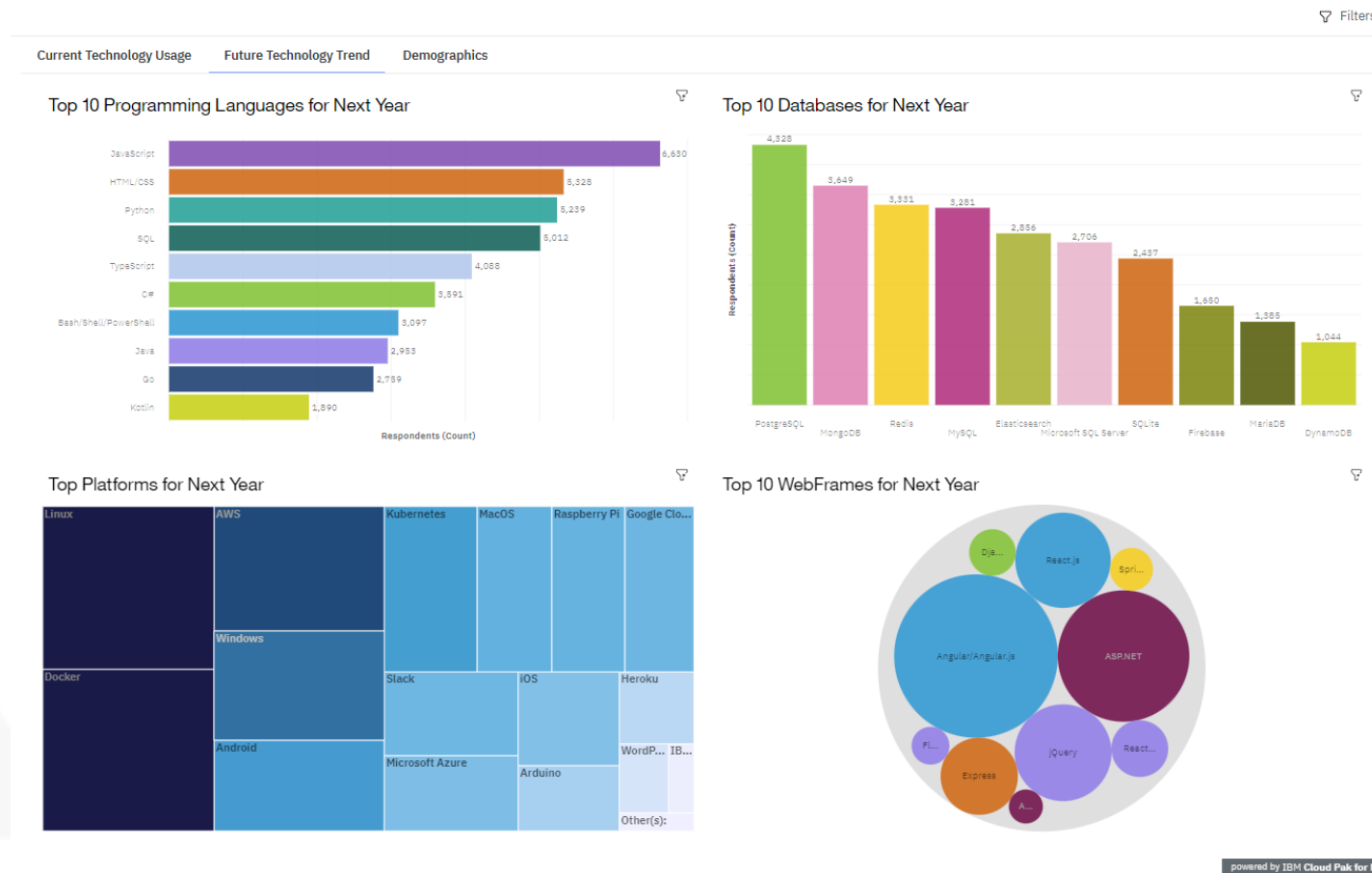- All of the databases expected to be in top 5 for 2019 are *open source*.

DASHBOARD
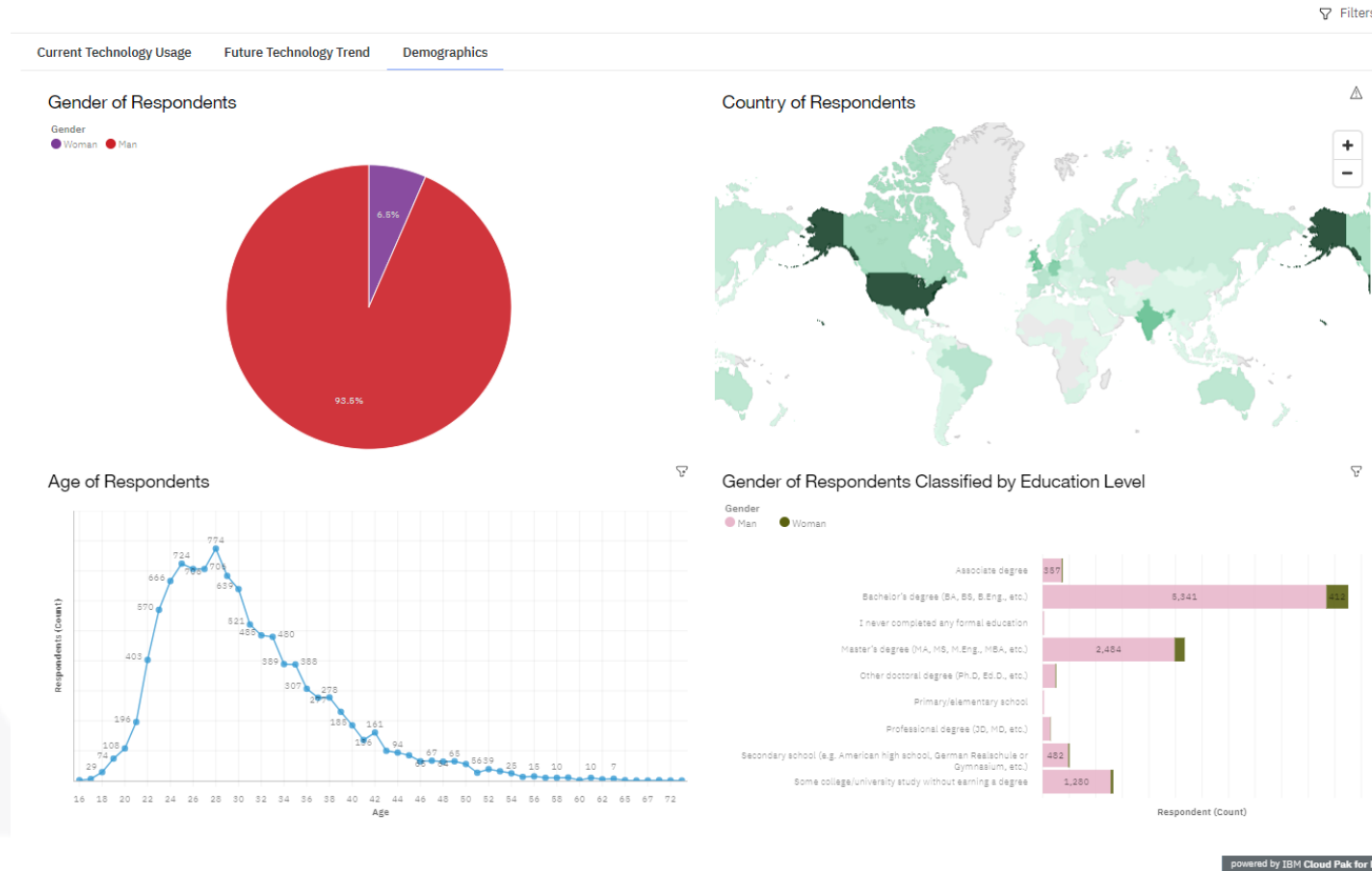
View the original dashboard HERE (valid until Jan 2023)

DASHBOARD — CURRENT TRENDS

DASHBOARD – FUTURE TRENDS

DASHBOARD – DEMOGRAPHICS

DISCUSSION

- Software development suffers from a severe gender gap between men and women.

- Demographics for other genders were not analyzed but should be assumed to be as unequal *or worse*.

- The importance of open source software continues to increase year after year.

OVERALL FINDINGS & IMPLICATIONS

Findings

- Python's popularity is rising

- Open source and NoSQL
  are becoming more important.

Implications

- Python is a vital language for developers to know.

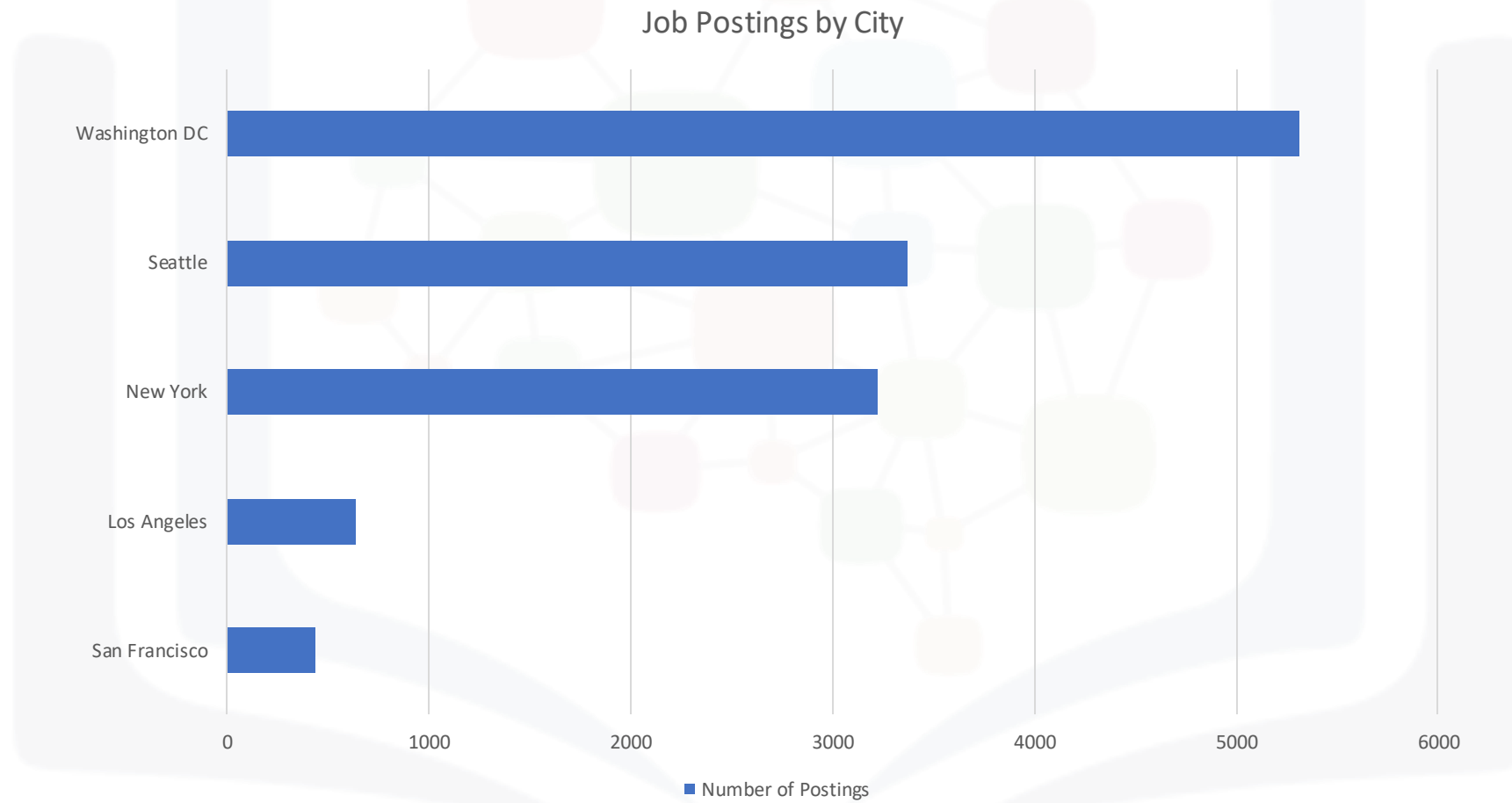- The supremacy of closed-source SQL RDMS is ending.

CONCLUSION

- The importance of NoSQL and open-source are affecting database trends.

- Web development with JavaScript and HTML/CSS dominates software development.

- Python is becoming on the most important programming languages.

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APPENDIX

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

JOB POSTINGS

Job Postings by City

POPULAR LANGUAGES

Annual Average Salary by Programming Language