DEVELOPER SURVEY 2019

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OUTLINE

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

EXECUTIVE SUMMARY

- Data contextualization and analysis goal
- Methodology description
  - Data gathering
  - Data analysis
  - Data visualization
- Presentation of results, supported by graphs and trends
- Overall findings and implications
- Final conclusions of the research

INTRODUCTION

- Stack Overflow's Developer Survey: the largest survey about people who code in the world
- Nearly 90,000 developers took the 20-minute survey
- Analysis of the trends in software development
- The following were investigated using the data:
  - Skills for requirements in the future
  - Top programming languages in demand
  - Most in-demand database skills
  - Most popular webframes and platforms

METHODOLOGY

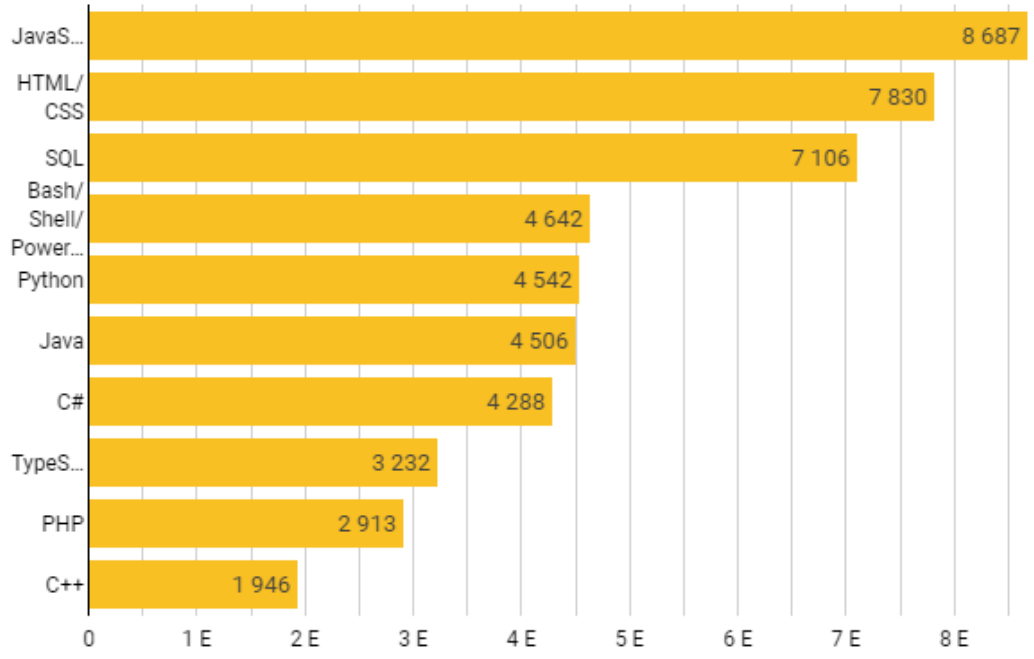
- Data collection
  - Stack Overflow's Developer Survey 2019
  - GitHub Job Postings
  - APIs and webscraping
- Data cleaning
- Exploratory data analysis
  - Distribution
  - Outliers
  - Correlations
- Data visualization
  - Various charts and plots
  - Interactive dashboards

RESULTS

PROGRAMMING LANGUAGE TRENDS

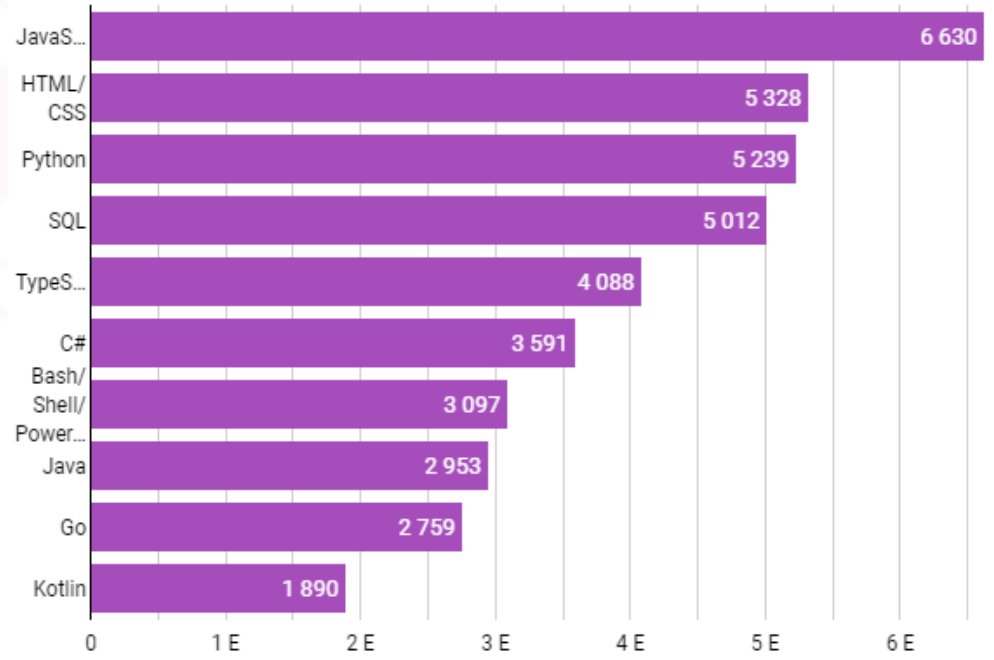
Current Year

Top 10 Languages Worked With



Next Year

Top 10 Languages Desired Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

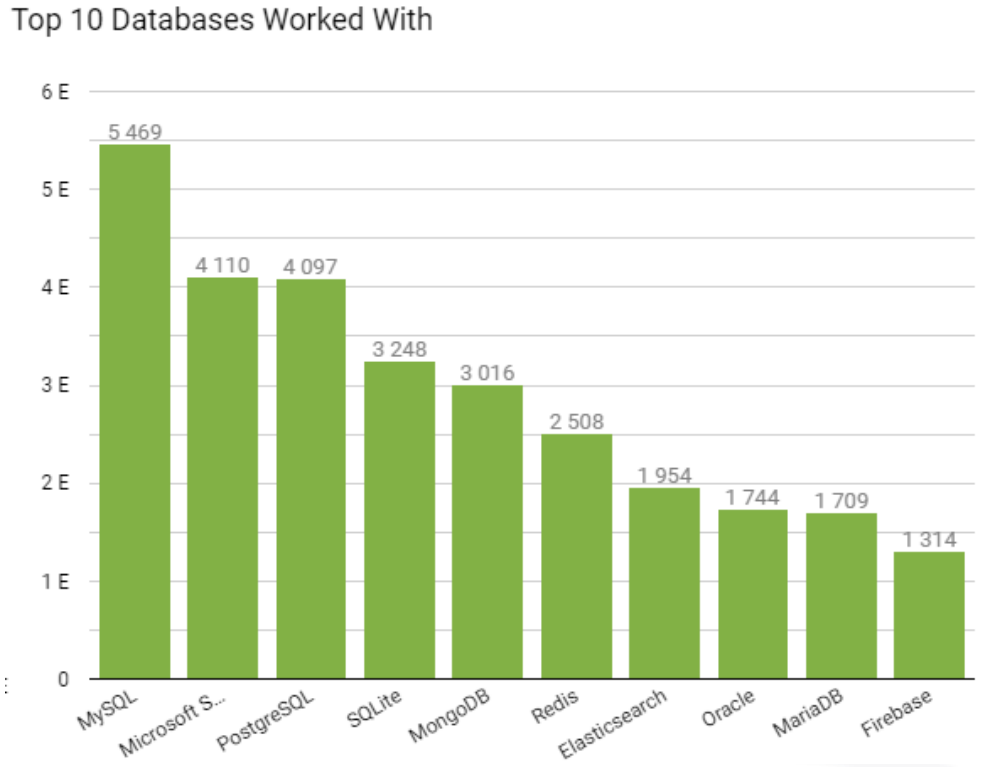
- JavaScript is the leading language and will remain
- Python is the fastest growing language
- The demand SQL and Java will decrease in the coming years

Implications

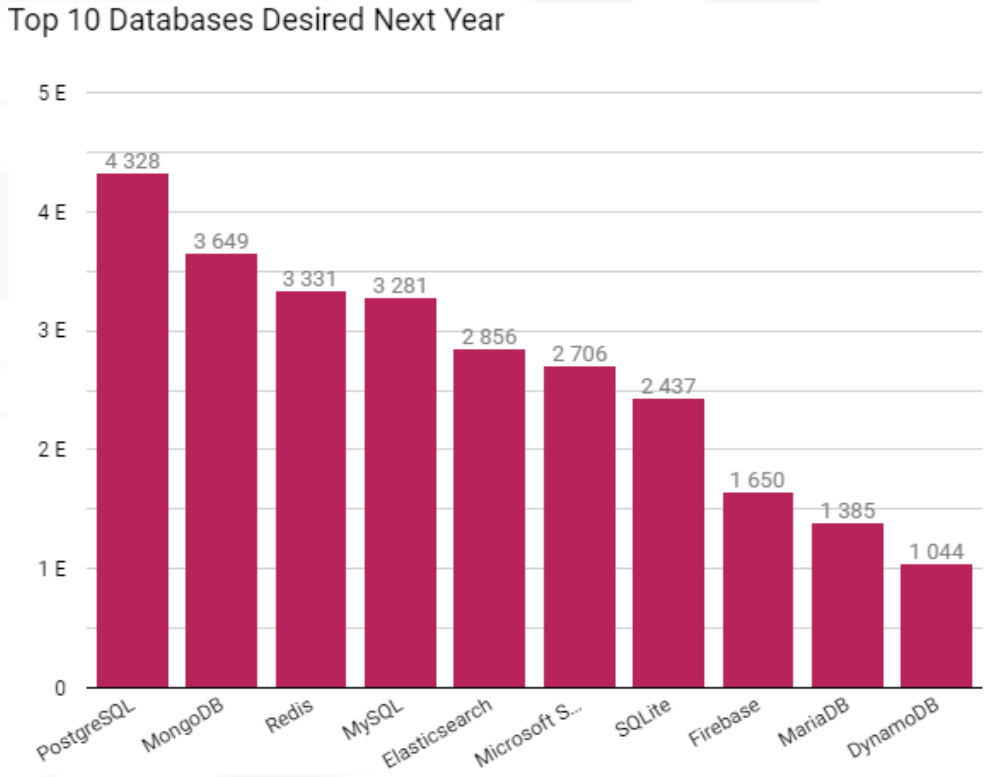
- Web development languages are in high demand
- With the rise of AI and ML, Python seems to be the best choice
- SQL still seems to be relevant

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is the most used database, but will fall in the coming years
- PostgreSQL and MongoDB are on the rise
- Redis is an up and coming new software

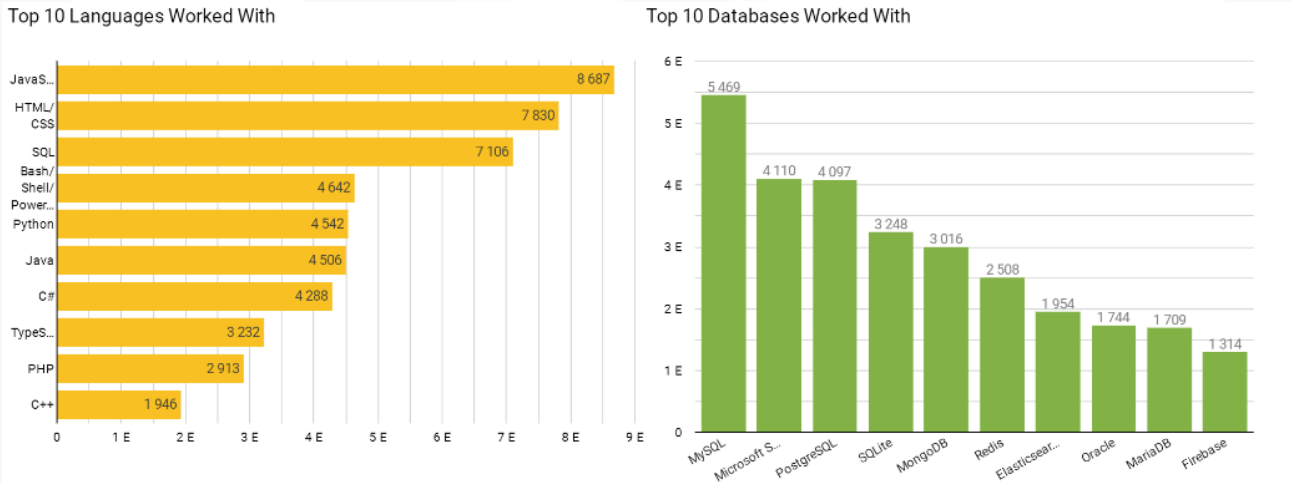
Implications

- Open-source databases are preferable at companies
- PostgreSQL and MongoDB are establishing themselves
- Microsoft SQL and SQ lite are less attractive to users

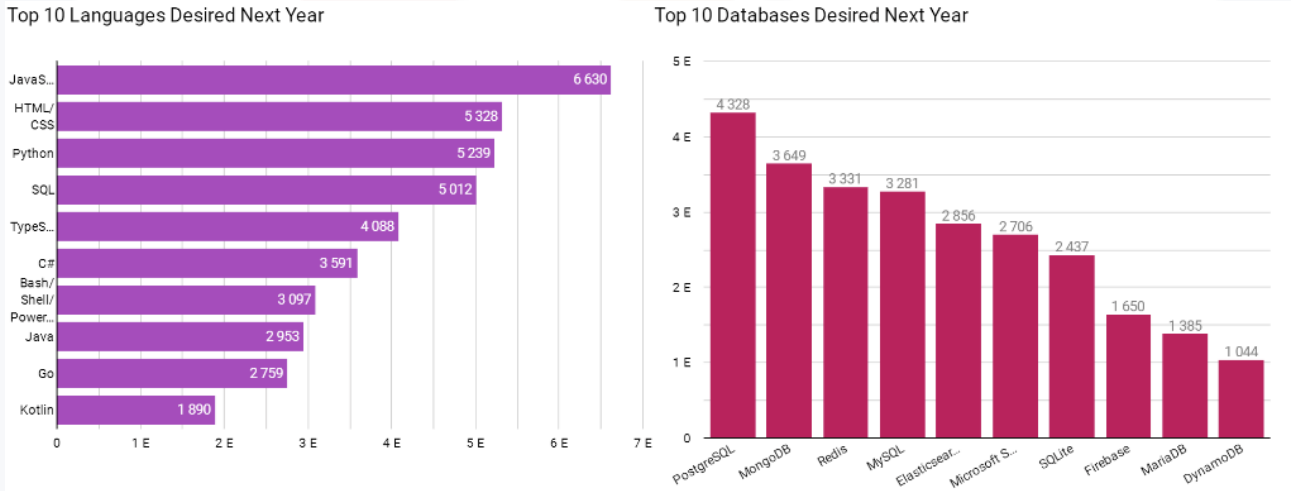
DASHBOARD

https://github.com/thegonda/IBM-Data-Analyst/blob/main/Dashboard.pdf

DASHBOARD TAB 1

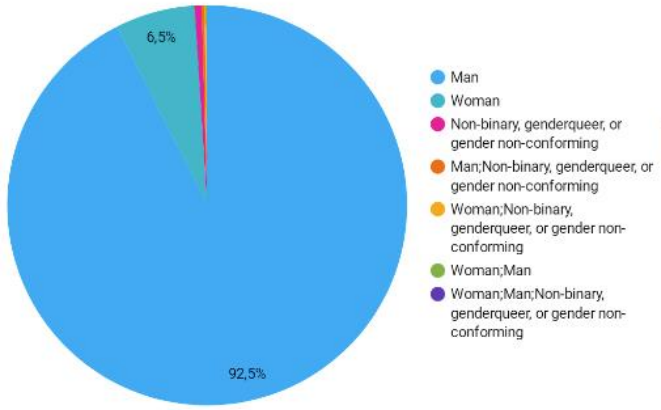


DASHBOARD TAB 2

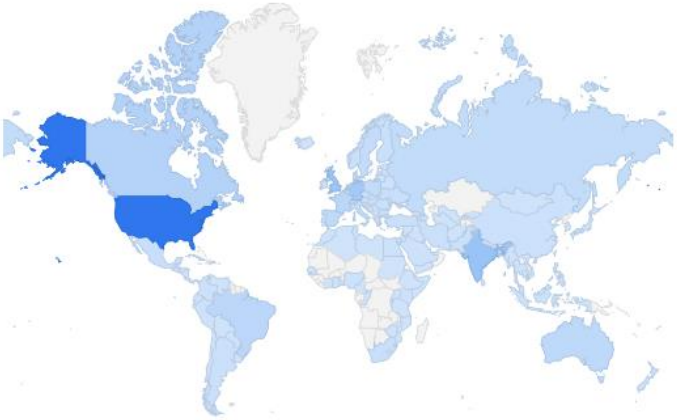


DASHBOARD TAB 3

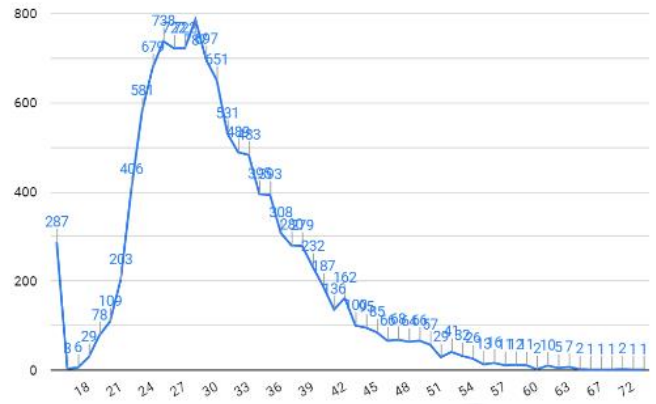
Respondents by Gender



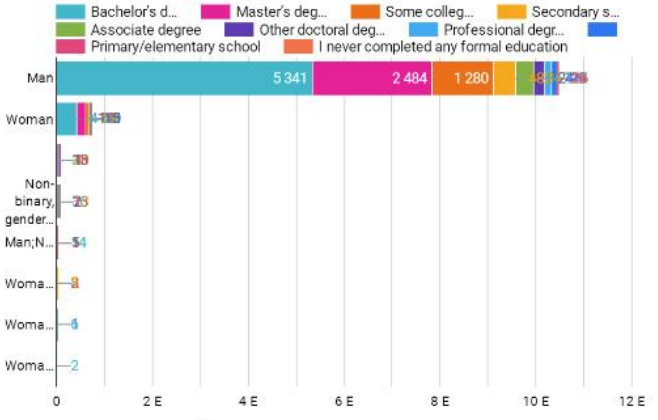
Respondents by Country



Respondents by Age



Respondent Education Level by Gender



DISCUSSION

OVERALL FINDINGS & IMPLICATIONS

Findings

- JavaScript is the most popular language, Python is growing
- PostgreSQL and Mongo DB will overtake MySQL
- Gender gap in jobs
- Developers mostly located in developed countries

Implications

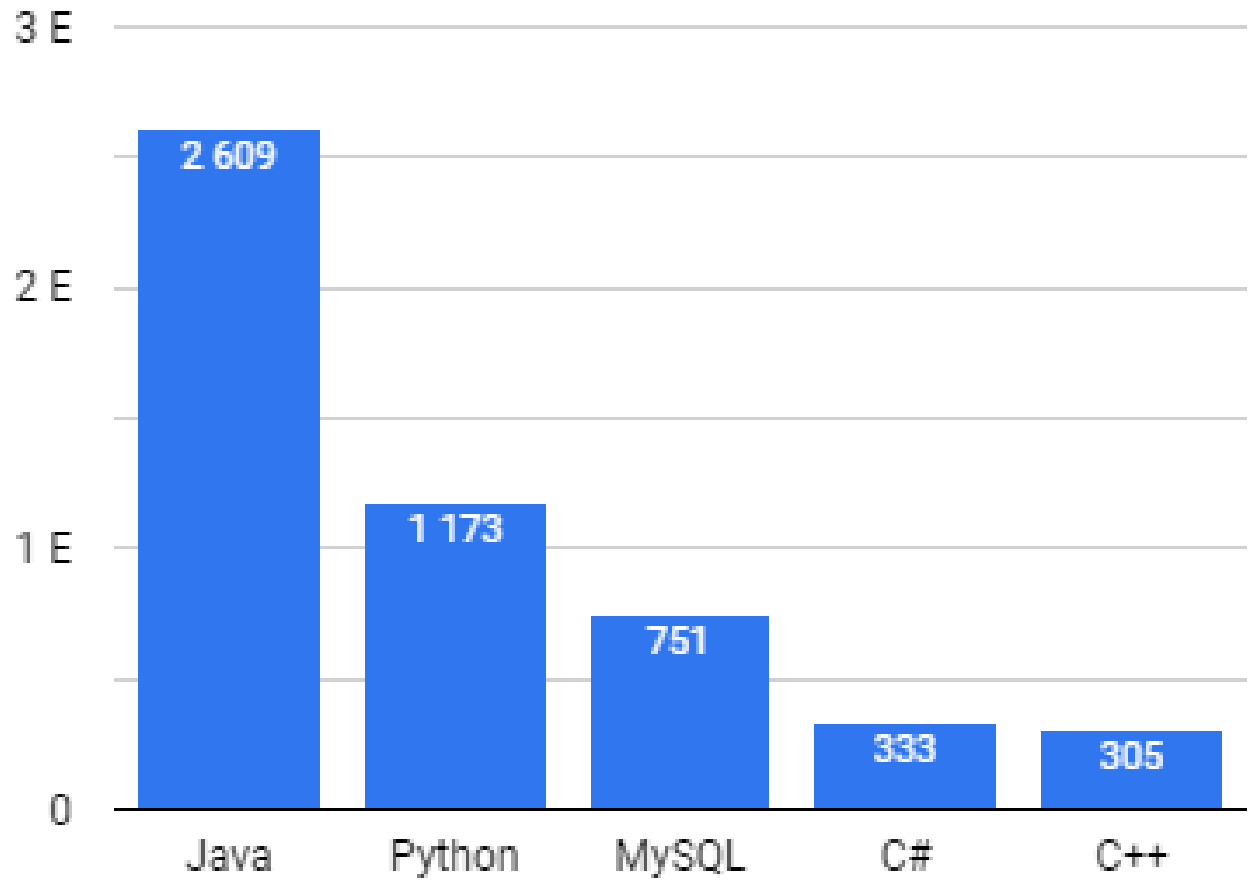
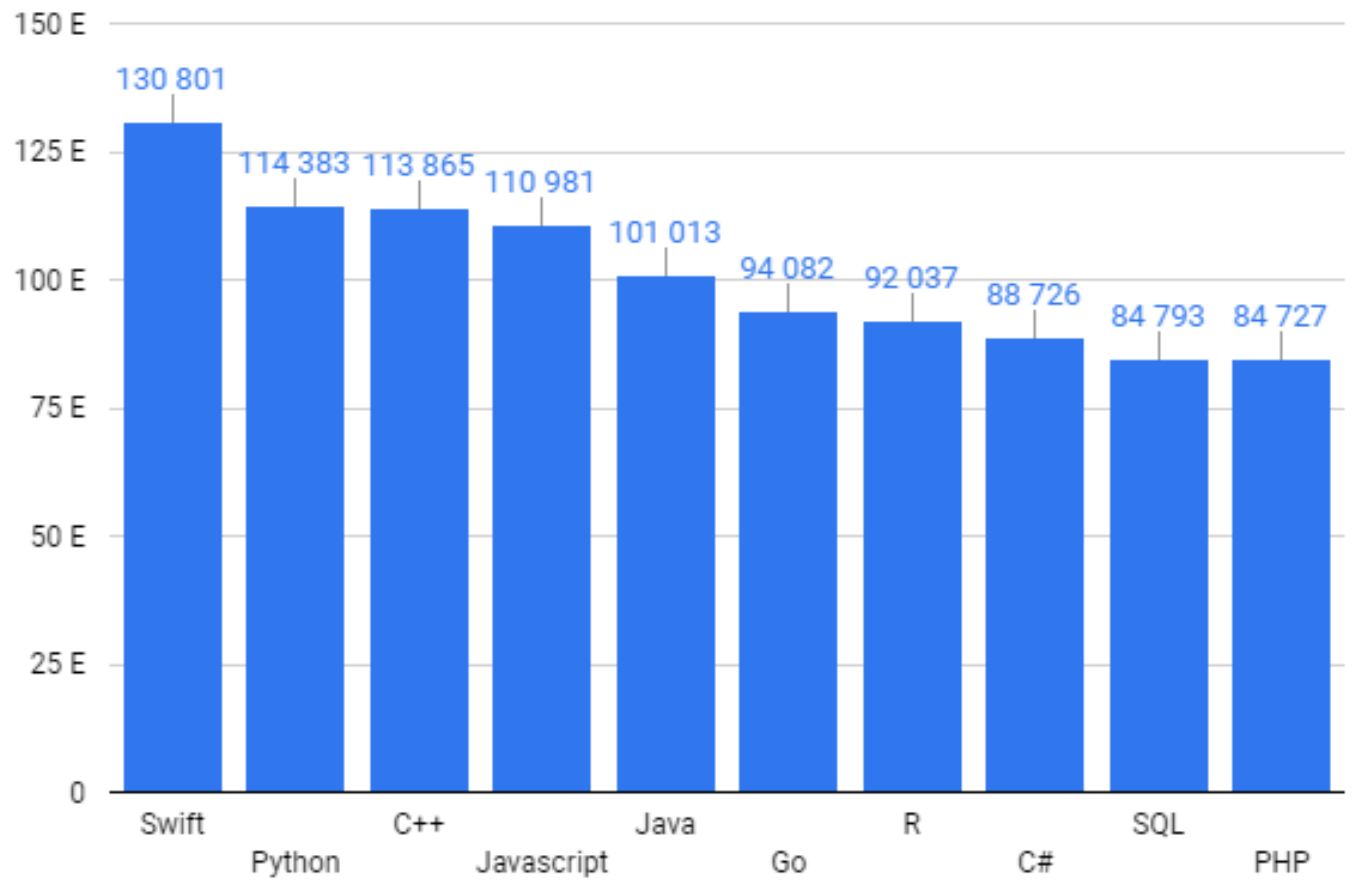
- SQL still seems to be widely used
- Companies prefer open-source databases
- Polarization of developers needed
- Technologies need to spread to lagging countries

CONCLUSION

- Technology trends are rapidly changing, but there are mainstays
- Web development languages are in high demand
- Python will increase vastly over the years
- Open-source databases are preferred
- Accessibility of the market needs to increase

APPENDIX

JOB POSTINGS



POPULAR LANGUAGES