

Emerging Trends

Chris Papadopoulos



© IBM Corporation. All rights reserved.

OUTLINE



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



EXECUTIVE SUMMARY



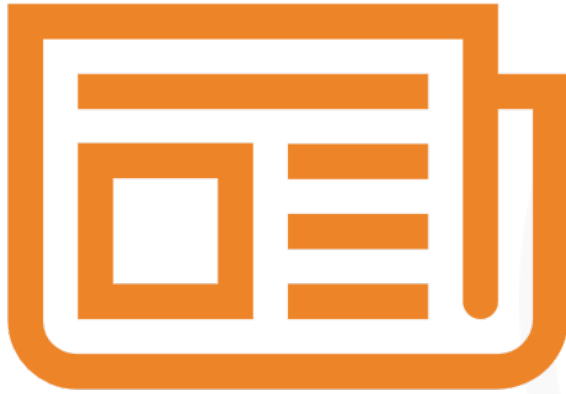
- **Web based languages/ technologies are most used**
- **Easy to use languages are more desired than complicated ones**

INTRODUCTION



- Stack overflow
 - Developers paradise
- Problem
 - Languages are changing often
- Questions
 - What are the world demands?
- Be on the lookout for...
 - What do the developers want

METHODOLOGY



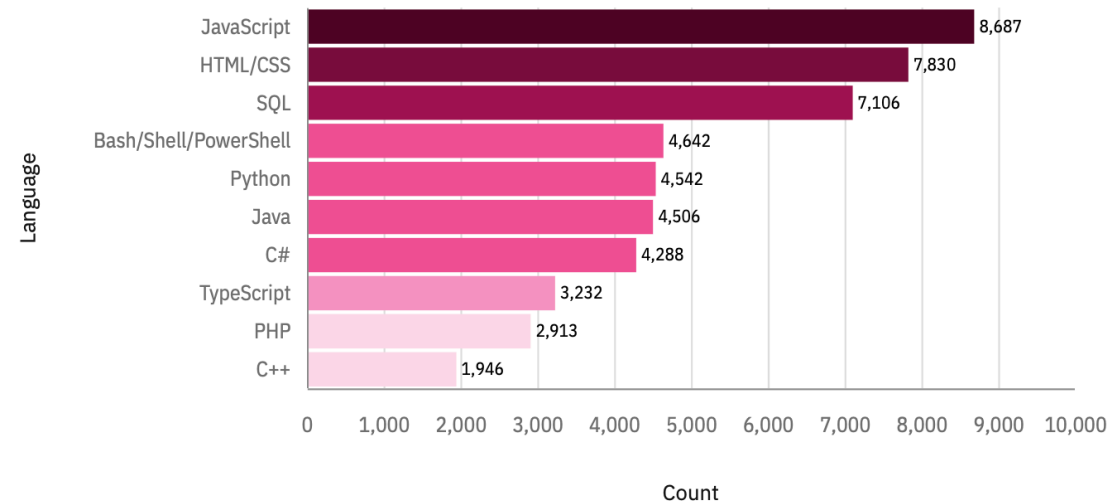
- Data collection / wrangling
 - Modified GitHub Jobs API
 - Programming language salaries from Web Scraping²
 - Modified Stack Overflow Survey Results
- Data analysis / visualization
 - Exploring through visualization
 - Creating dashboards

PROGRAMMING LANGUAGE TRENDS

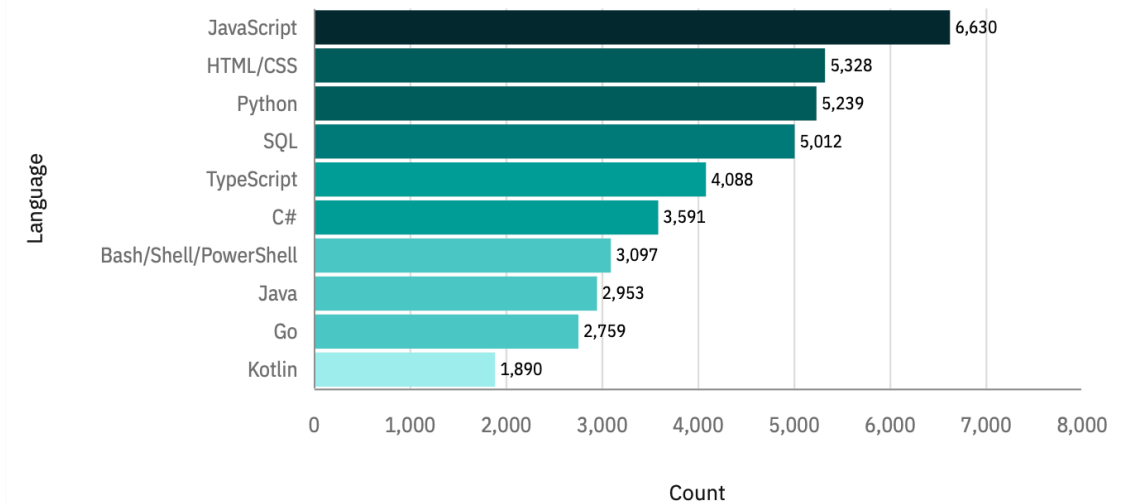
Current Year

Next Year

Top 10 Languages Worked With



Top 10 Languages Desired Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript is the most used and most desired language and Python demand is increasing fast
- Lost interest in Bash and Shell scripting

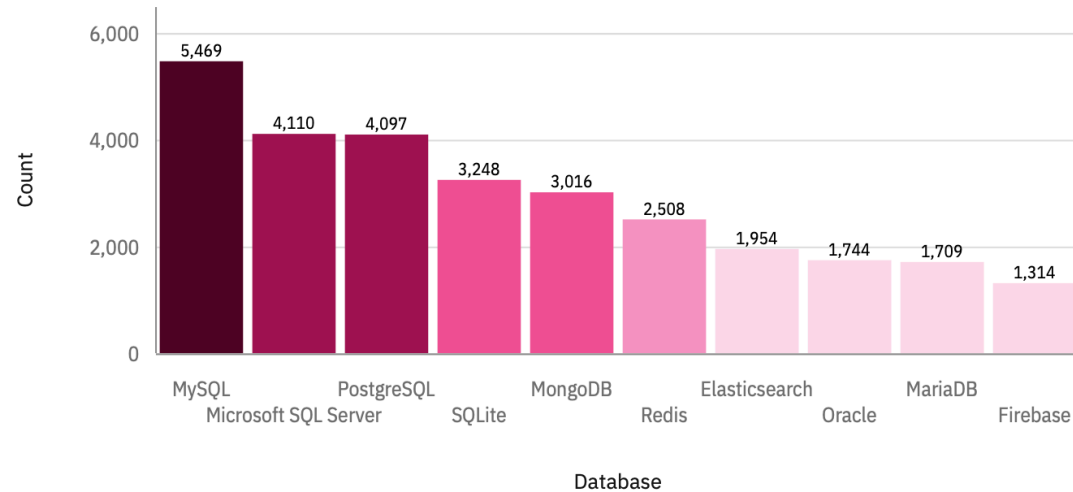
Implications

- Since the web is such a prominent aspect of the tech world it makes sense that web languages are at the top
- JavaScript is being continually upgraded and made more easy to use, a large complaint is the lack of typing
- Go & Kotlin are languages that are also contain Typing and have simple syntaxes

DATABASE TRENDS

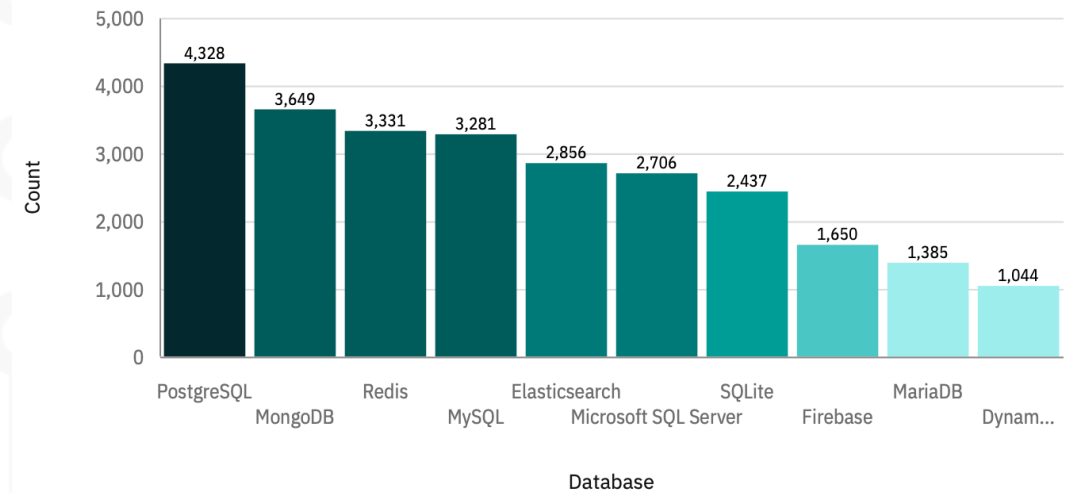
Current Year

Top 10 Databases Worked With



Next Year

Top 10 Databases Desired Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Oracle is not in the top 10 most desired
- Relational Databases are still popular
- Developers losing interest in Microsoft SQL Server

Implications

- As data becomes more prevalent and valuable storing it becomes more important, thus explaining the increase in data stores
- PaaS tools are gaining in popularity



DASHBOARD

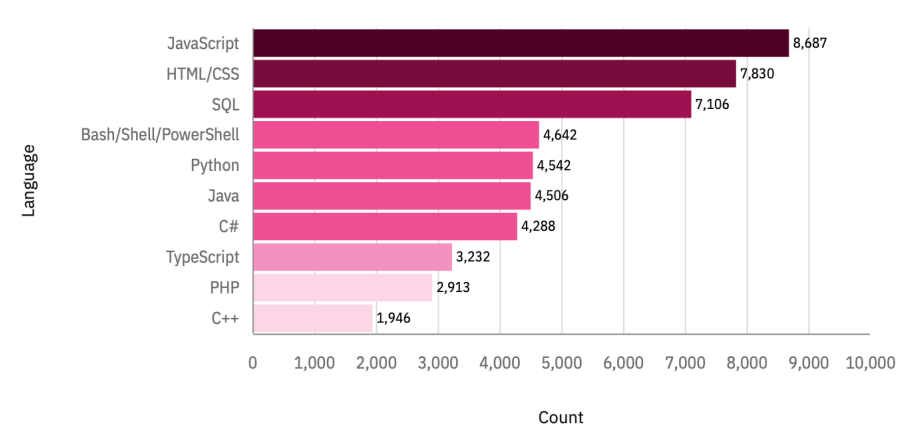
Can be found in GutHub Repo

© IBM Corporation. All rights reserved.

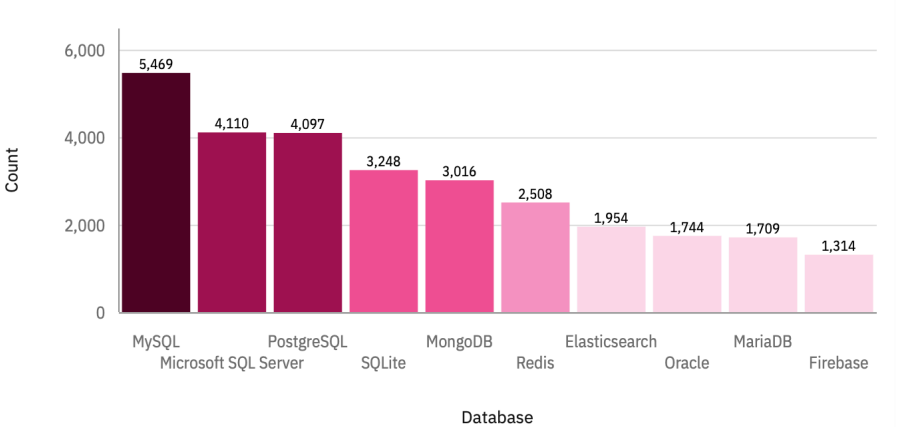
DASHBOARD TAB 1

Current Technology Usage

Top 10 Languages Worked With



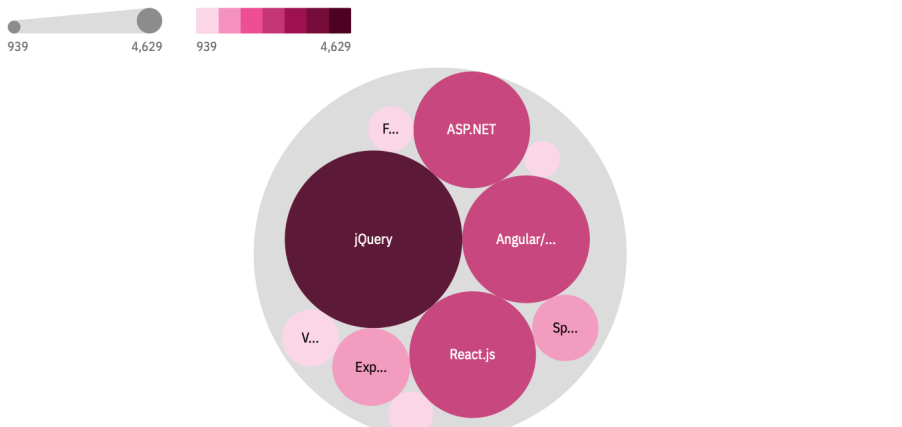
Top 10 Databases Worked With



Top Platforms Worked With



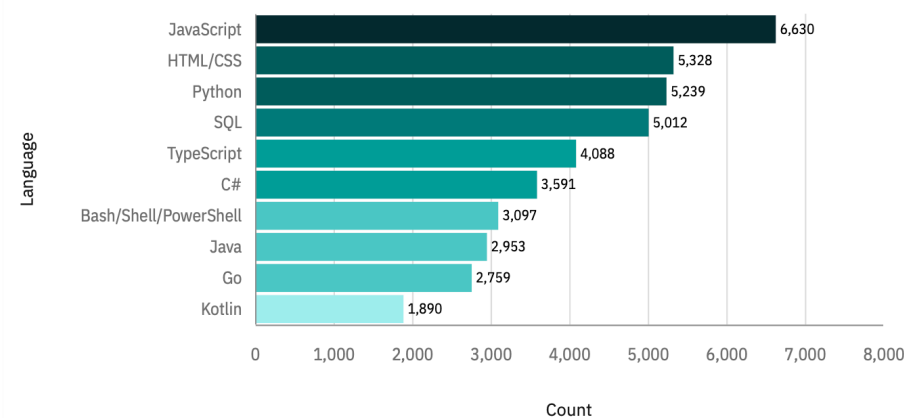
Top 10 Web Frameworks Worked With



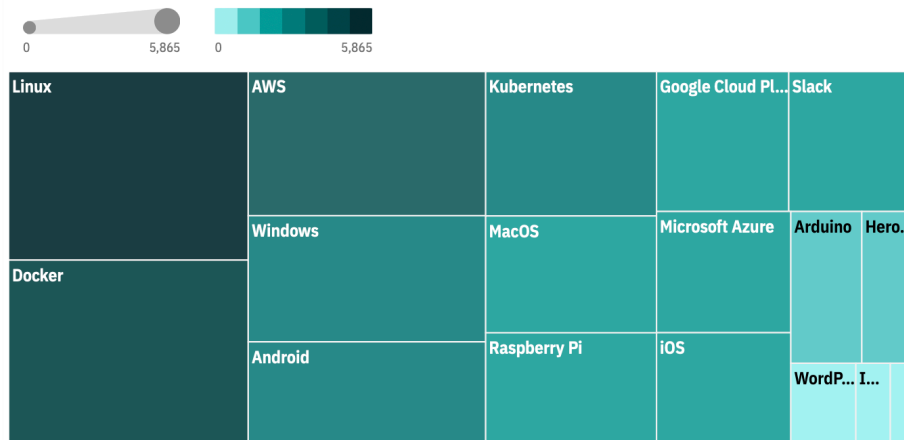
DASHBOARD TAB 2

Future Technology Trend

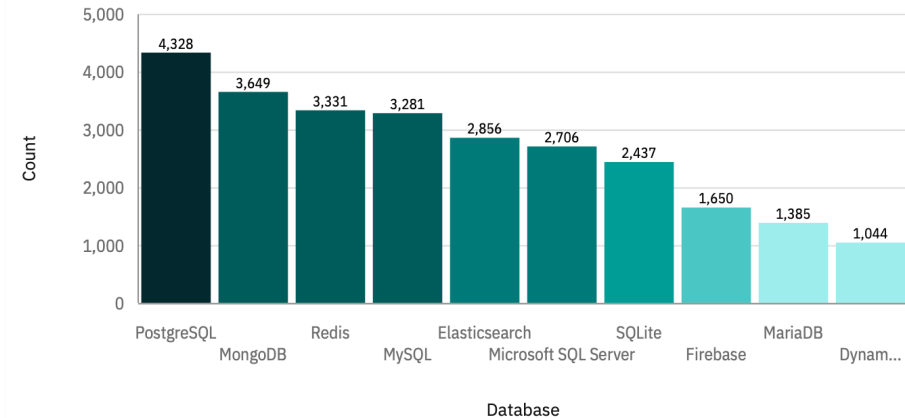
Top 10 Languages Desired Next Year



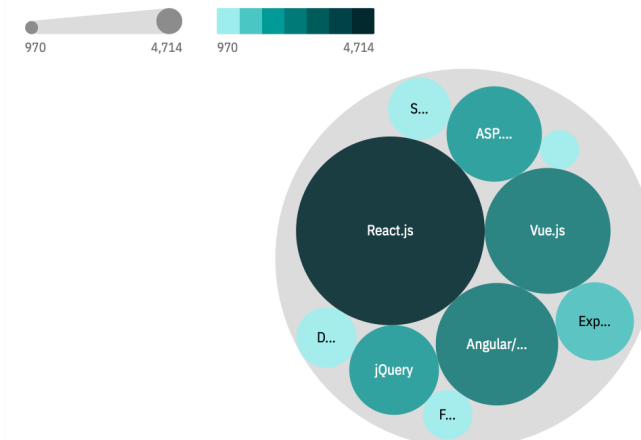
Top Platforms Desired Next Year



Top 10 Databases Desired Next Year



Top 10 Web Frameworks Desired to Work With Next Year

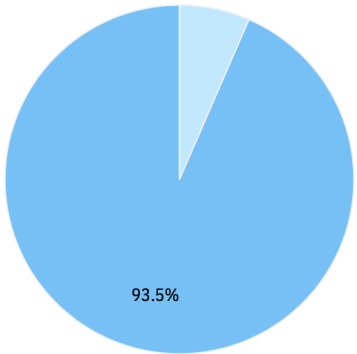


DASHBOARD TAB 3

Demographics

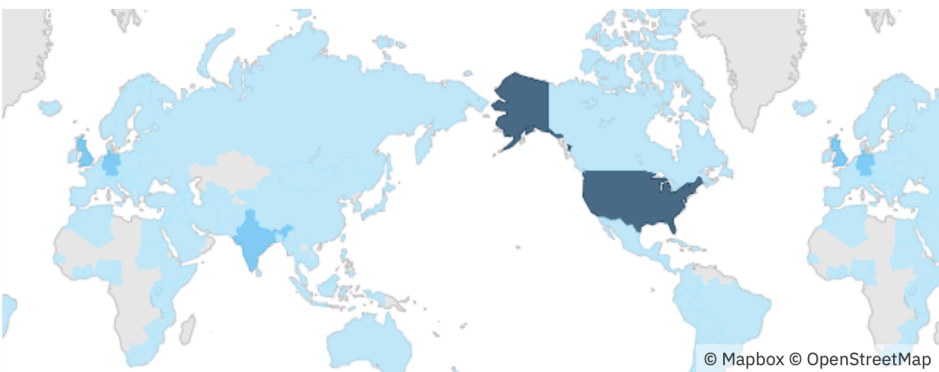
Respondent Count by Gender

Gender
● Woman ● Man

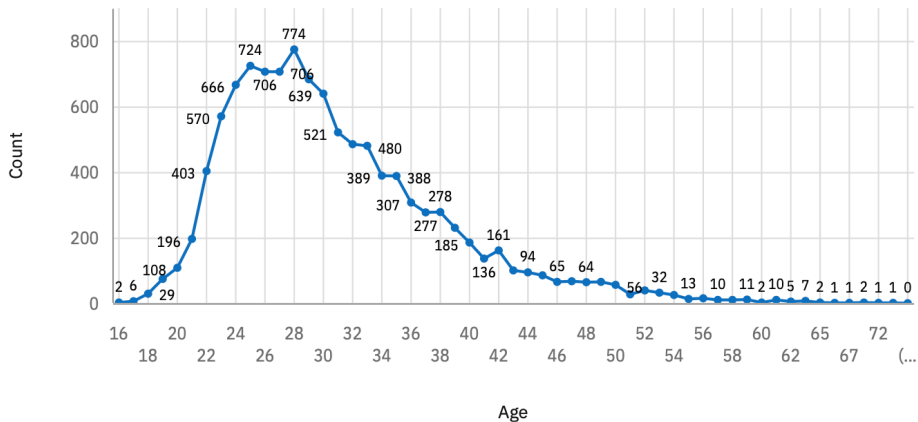


Respondent Count by Country

Country (Count)
1 3,058

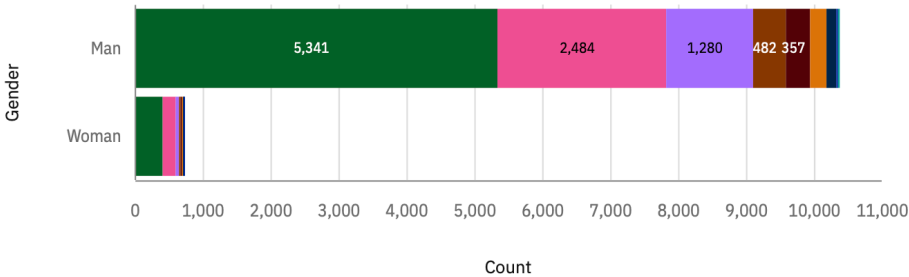


Respondent Count by Age



Respondent Education Level Count by Gender

Education Level
● Bachelor's degree (BA, BS, B.Eng., etc.)
● Master's degree (MA, MS, M.Eng., MBA, etc.)
● Some college/university study without earning a degree
● Secondary school (e.g. American high school, German Realschule or Gymnasium, etc.)





DISCUSSION

© IBM Corporation. All rights reserved.

OVERALL FINDINGS & IMPLICATIONS

Findings

- JavaScript widely used and TypeScript getting popular.
- Over 90% young male developers.
- Developers mostly located in developed countries.

Implications

- JavaScript and TypeScript web frames gaining followers.
- Global polarization of developers location and gender.
- Young developers without postgrad studies on its majority.

CONCLUSION

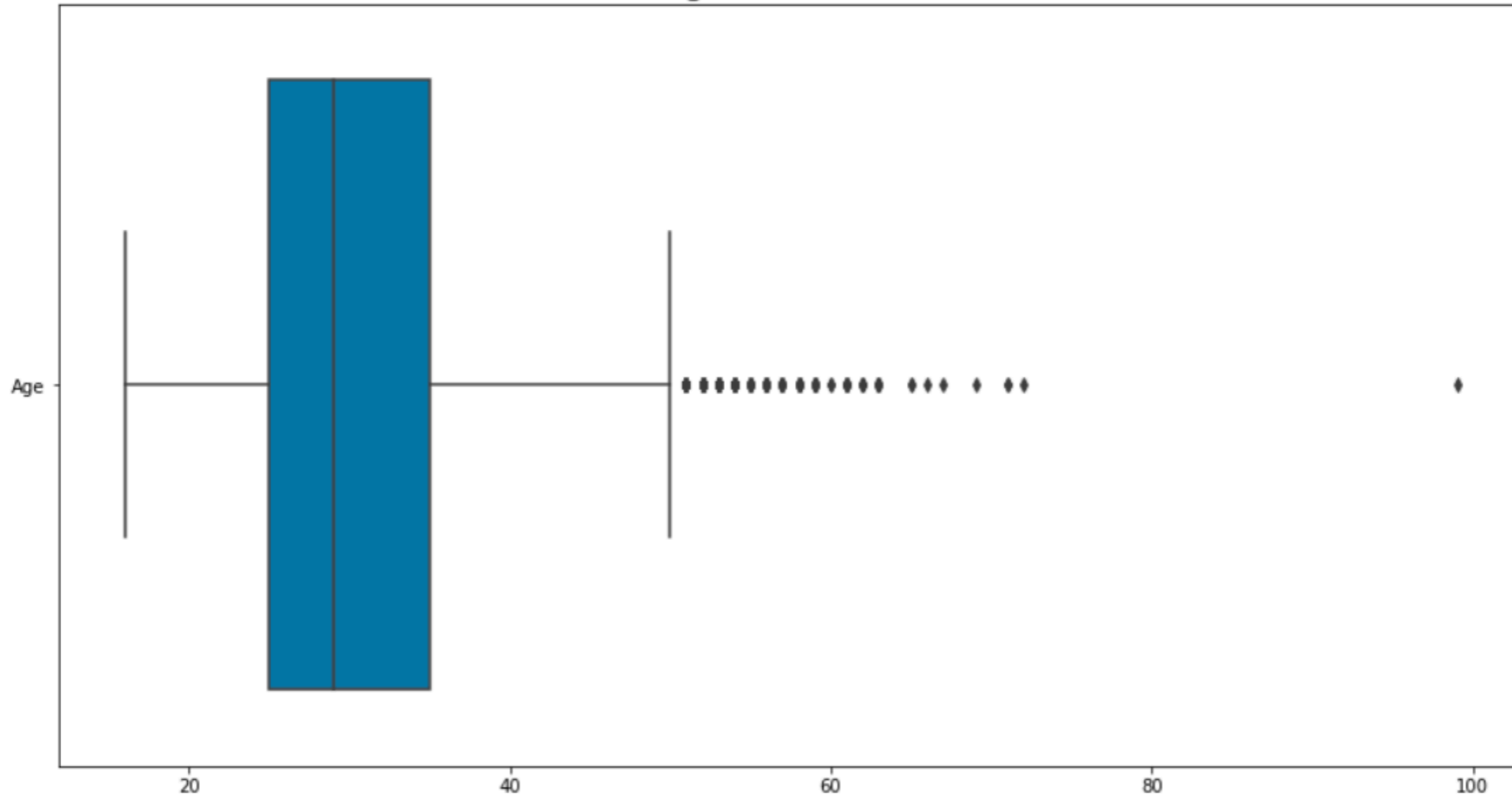


Developers look for the following key points for choice of language and technology:

1. Syntactically simple languages
2. Tools with less overhead
3. Tools that are less error prone

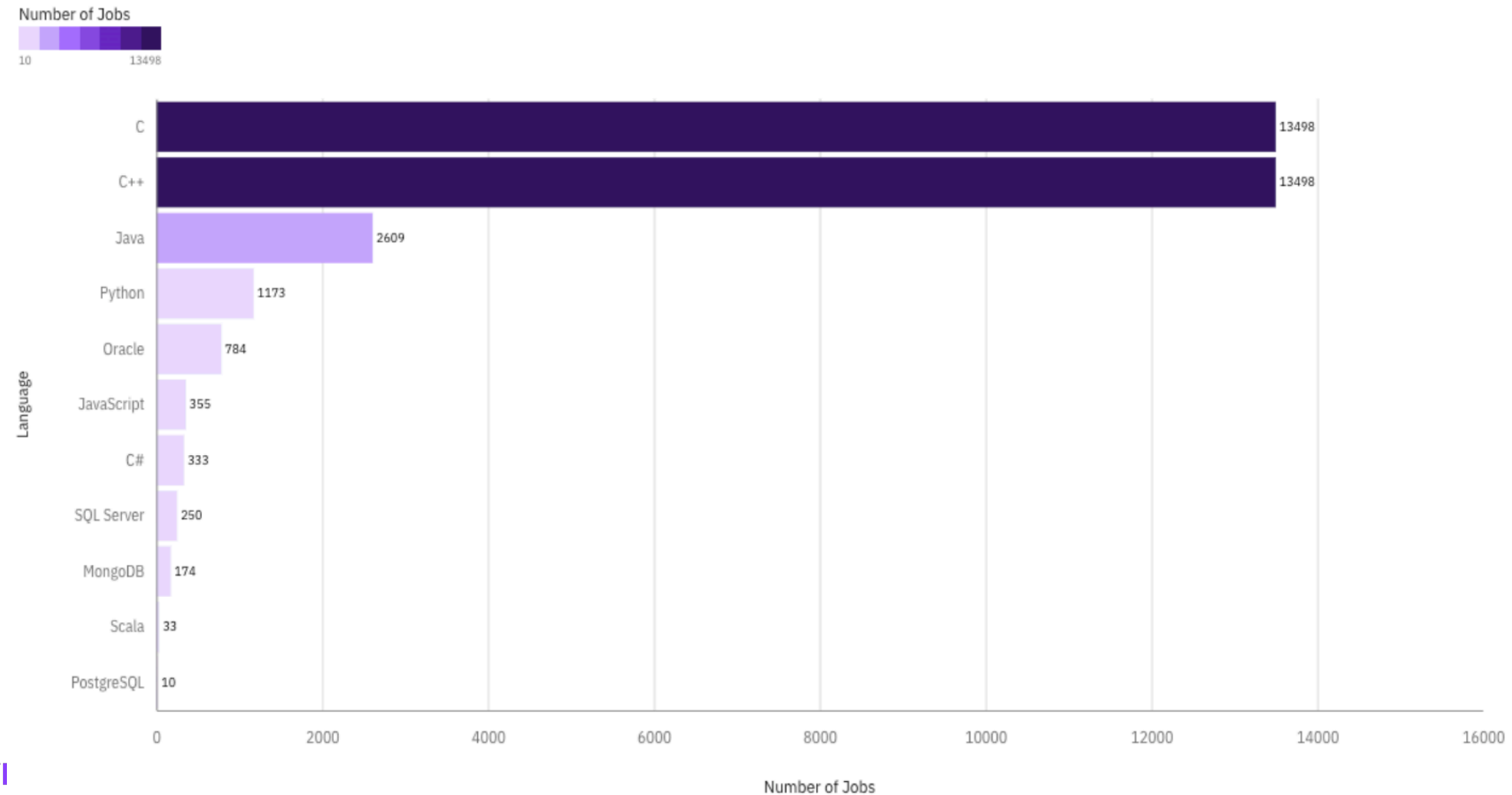
APPENDIX

Age Distribution



JOB POSTINGS

Number of Jobs by Language



POPULAR LANGUAGES

Average Annual Salary by Language

