



Stack Overflow Developer Survey 2019

Shivangi Mehrotra

17th Jan 2024

OUTLINE



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

EXECUTIVE SUMMARY



Technology Trend Analysis Current/Future

- Language
- Database
- Platform
- Web Frame

Demographic trends

INTRODUCTION



Analyze technology trend in software and web development among developers around the world

Purpose of this Analysis :

- Identify the top programming languages, database, platform and web frame skills in demand
- Identify skill requirements for future
- Identify human resource gap in the industry

METHODOLOGY



- Data Collection (Sources)
 - Stack overflow developer 2019 survey
 - GitHub job postings
 - Programming languages annual salary
- Data Wrangling
- Data Exploration
- Data Cleaning
- Data Visualization
 - Python matplotlib
- IBM Cognos Dashboard
- Presentation

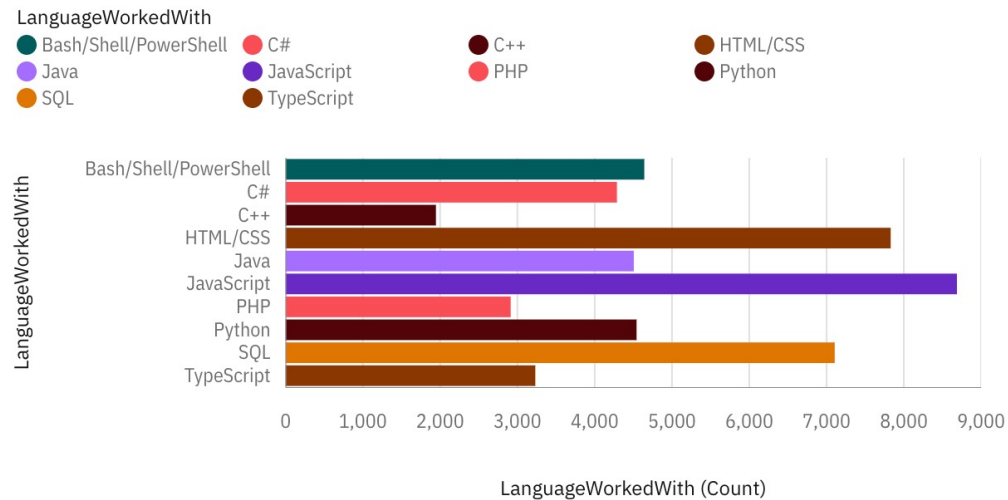
RESULTS



PROGRAMMING LANGUAGE TRENDS

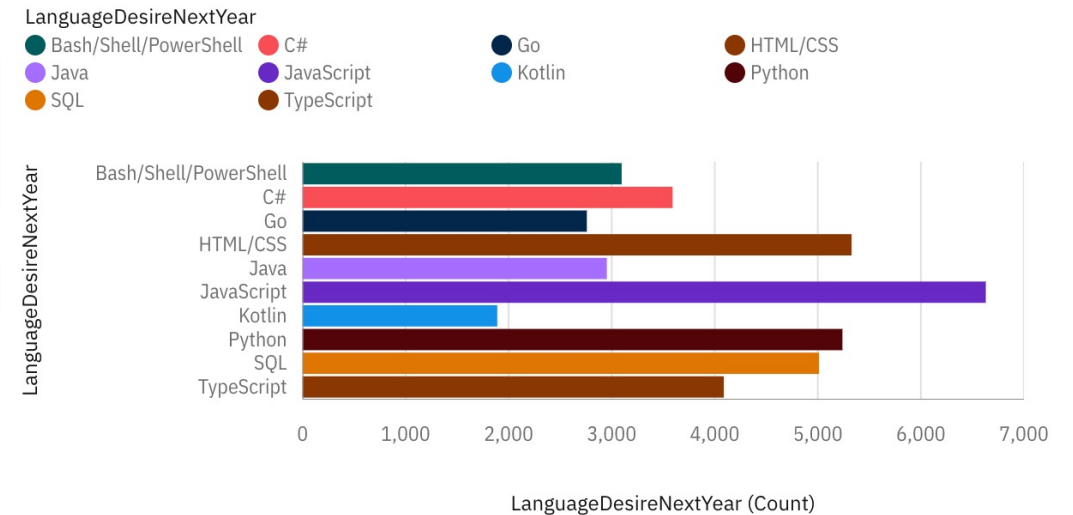
Current Year

Top 10 Languages worked with



Next Year

Top 10 Languages worked Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript is top trending language in the world
- Python and TypeScript are becoming more and more popular
- HTML/CSS and SQL still has great portion in language usage trend

Implications

- Web developments and Web developers are still in high demands
- JavaScript and TypeScript are crucial to learn for developers
- Python is the new trending language, especially popular in AI fields

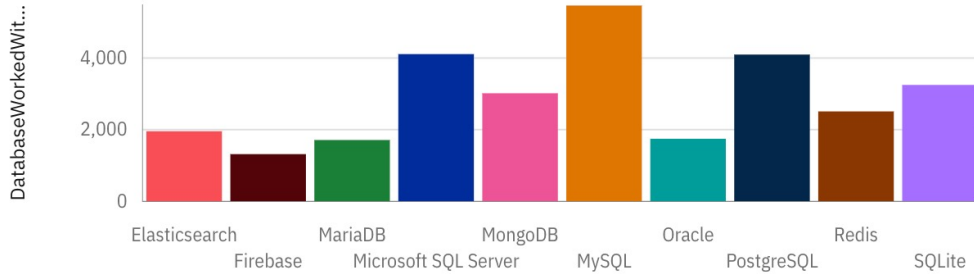
DATABASE TRENDS

Current Year

Top 10 Database worked with



DatabaseWorkedWith



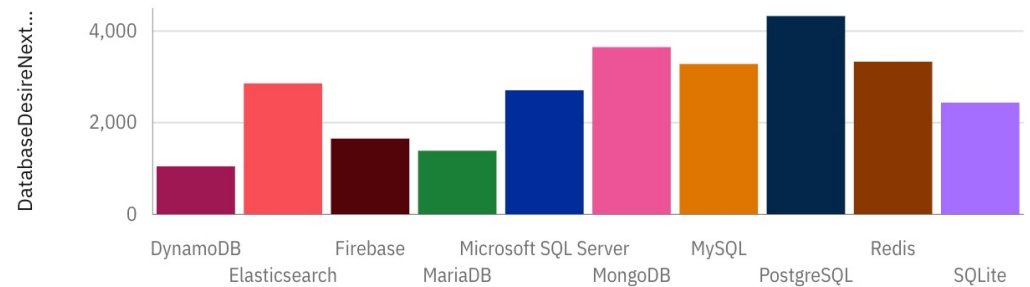
DatabaseWorkedWith

Next Year

Top 10 Database desire next year



DatabaseDesireNextYear



DatabaseDesireNextYear

DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is the most popular database
- There are still a lot of companies using Microsoft SQL Server
- MongoDB and Redis are the most favorable NoSQL database

Implications

- Open-source databases like MySQL are still preferable
- Software development and Big Data technology still requires SQL
- NoSQL databases will make an impact for relational databases

DASHBOARD



- https://github.com/deepshivi/Final_project_IBMDataAnalysis/blob/main/Final%20Project.pdf

DASHBOARD TAB 1

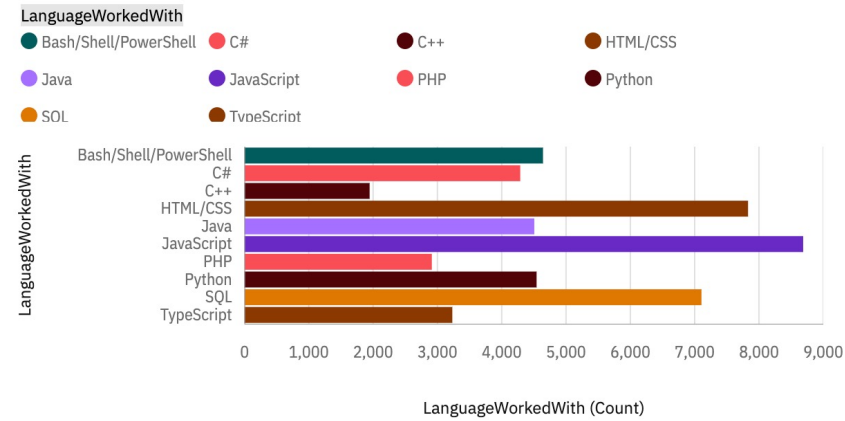
Current Technology Usage

Future Technology Trend

Demographics

+

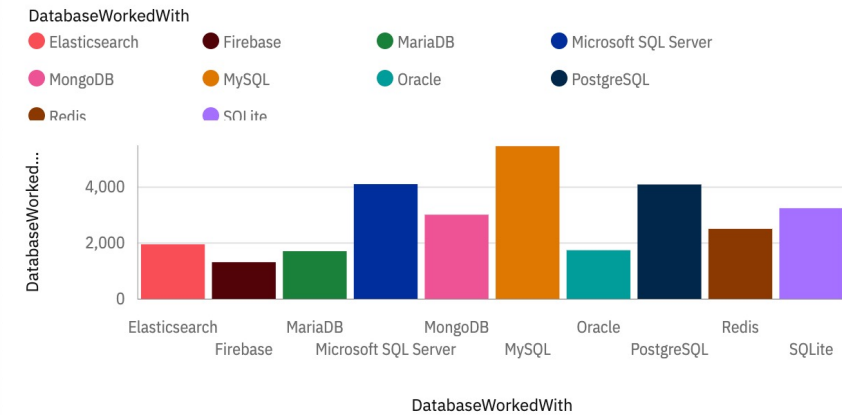
Top 10 Languages worked with



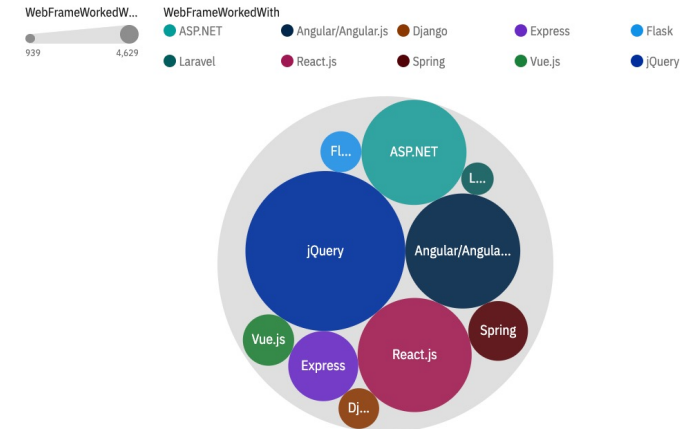
PlatformWorkedWith



Top 10 Database worked with

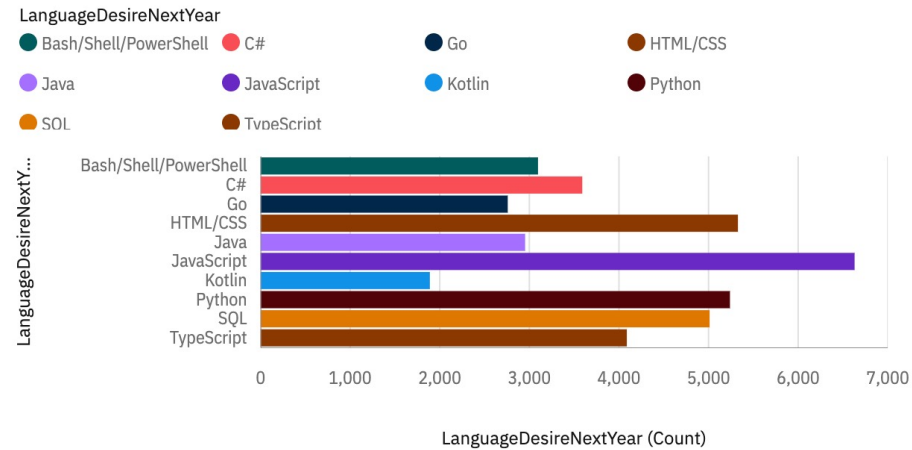


Top 10 Web Frame worked with

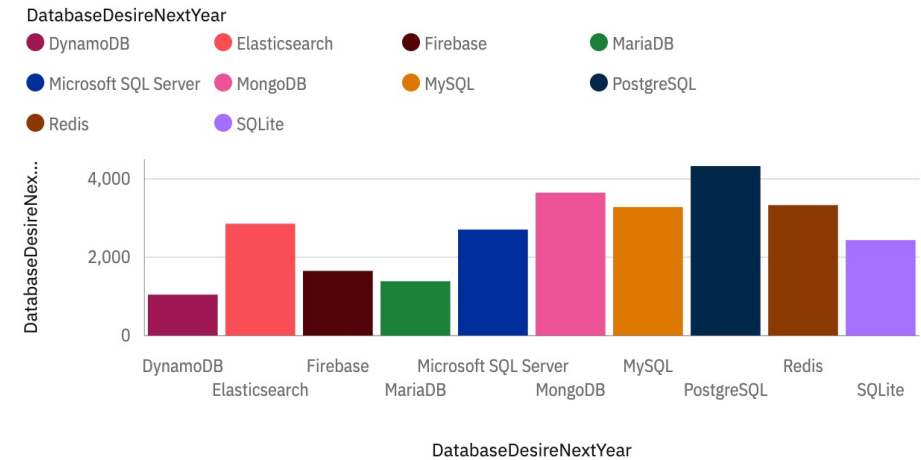


DASHBOARD TAB 2

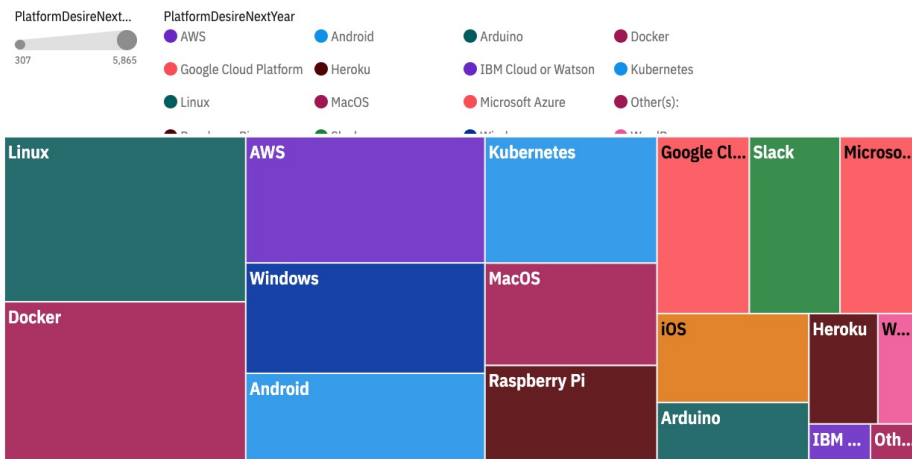
Top 10 Languages worked Next Year



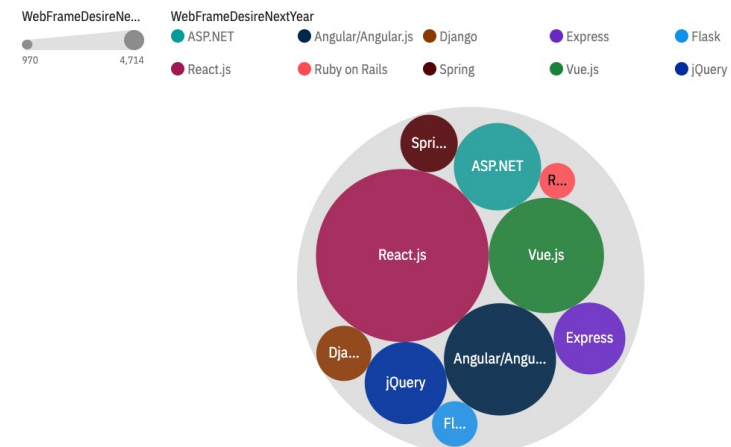
Top 10 Database desire next year



Platform Desire NextYear



Top 10 Webframework



DASHBOARD TAB 3

Current Technology Usage

Future Technology Trend

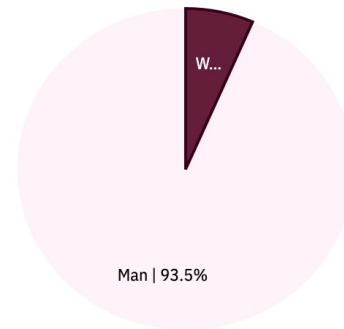
Demographics

+

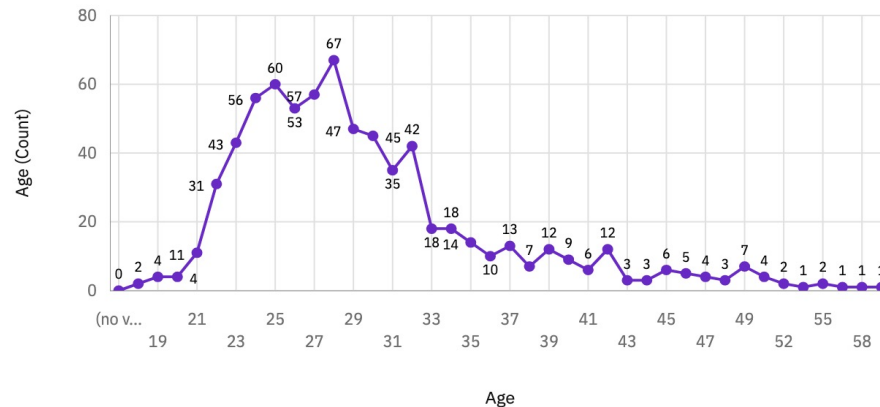
Respondent Count by Gender

Gender

Woman Man



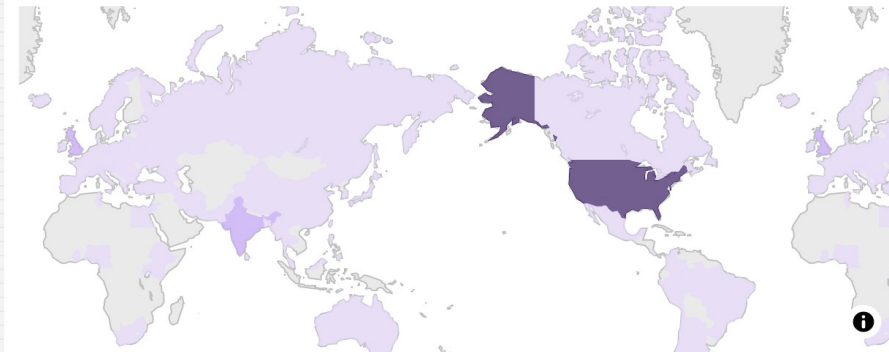
Respondent Count by Age



Respondent Count for Countries

Country (Count)

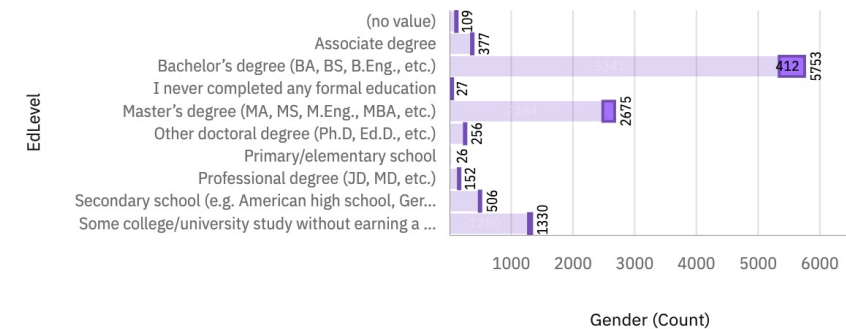
1 253



Respondent Count by Gender, classified by Formal Education Level

Gender

Man Woman



DISCUSSION

- Technology Usage Trend Now and Future
- Gender, Age and Education Discrimination in IT Industry

OVERALL FINDINGS & IMPLICATIONS

Findings

Technology trends changes every year

- USA is the top technology country
- There are extreme gender and age discrimination
- Docker and AWS are the most popular platfor

Implications

Programmers should always follow the latest technology trends

- More countries should have the equal chance to be exposed to new technology
- Gender and Age should not be one of the concerns or benefits of Employment

CONCLUSION



Technology Trends

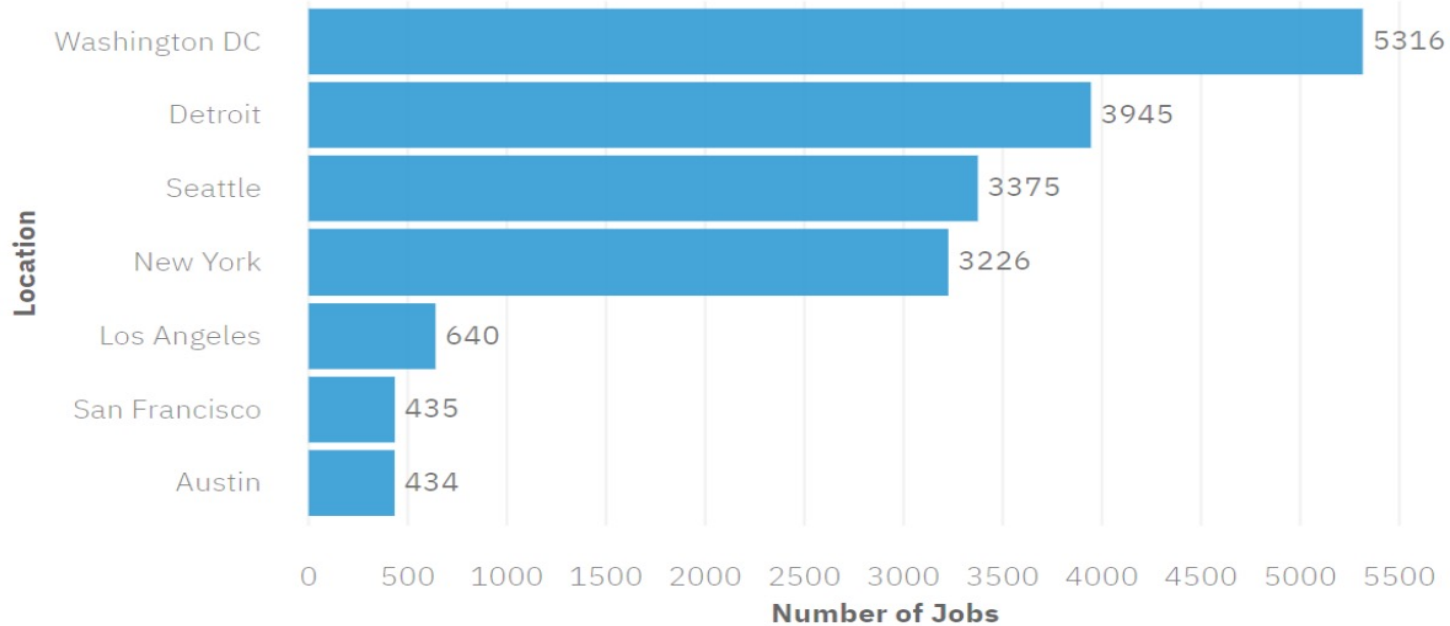
- Programming Languages, Database, Platform and Web frame Trends
- Demographics Trends
- Gender and Education
- Programming Languages Trends and Salary Trends

APPENDIX



- Stack Overflow's annual Developer Survey is the largest and most comprehensive survey of people who code around the world.
- Result don't represent everyone in the developer community.
- Trends to predict where the developers are going
- Characterization of developers around the globe.

JOB POSTINGS



POPULAR LANGUAGES

