



Petes' Project

Dr Peter Sarson

14th October 2023

IBM Developer

SKILLS NETWORK 

OUTLINE



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

EXECUTIVE SUMMARY



- Data Manipulation and analysis goal
- Methodology Description
 - Data Gathering
 - Data Analysis
 - Data Visualisations
- Results presented as graphs and charts
- Discussion of findings
- Conclusions

INTRODUCTION



- Stacks overflow developer survey is the most comprehensive questionnaire of software engineers from around the globe
- Close to 90000 responders
- Trends being seen in the industry

METHODOLOGY



- Explore survey data and content
 - Web scraping
 - APIs
- Data Wrangling
- Data Analysis and Visualisations
 - Distributions and Histograms
 - Box plots and outliers
 - Correlations using pandas

RESULTS



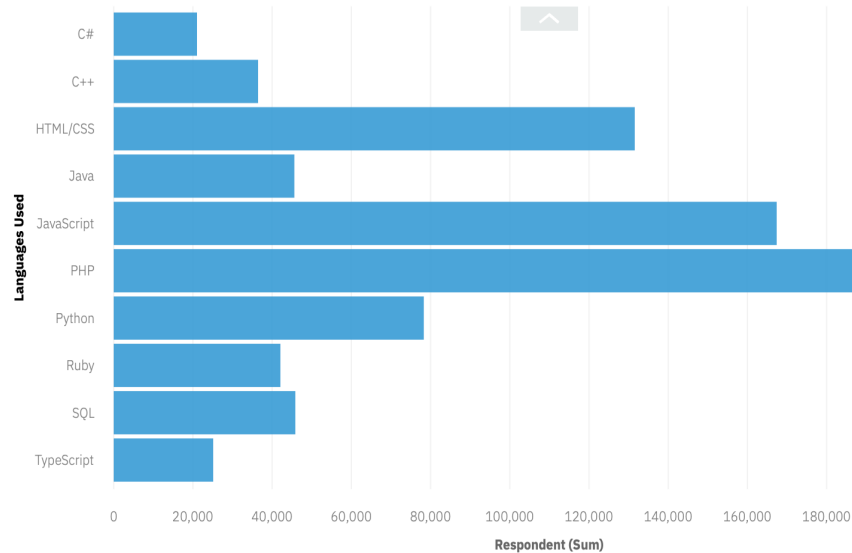
IBM Developer

SKILLS NETWORK 

PROGRAMMING LANGUAGE TRENDS

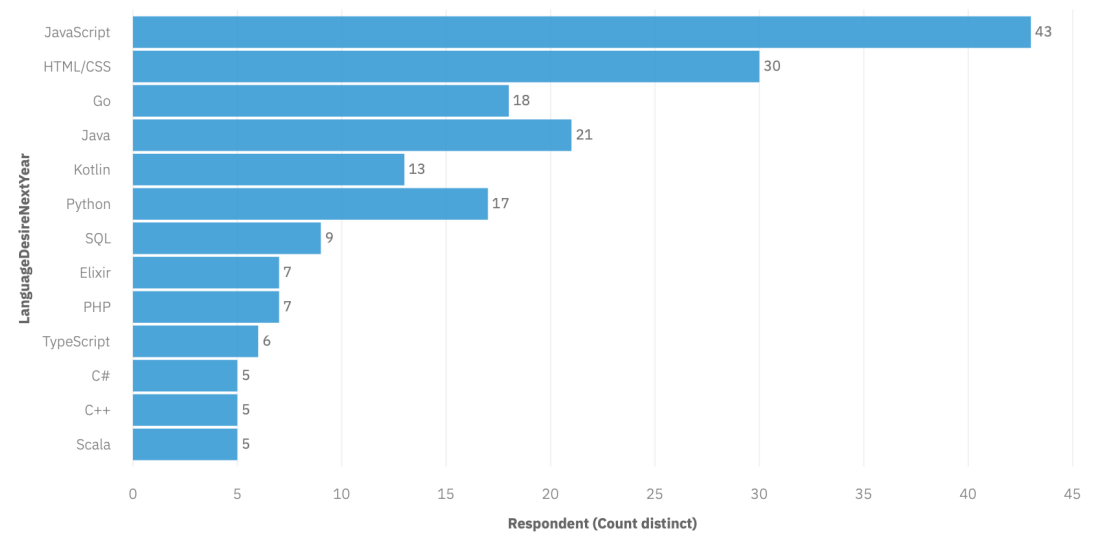
Current Year

Number of Languages Used by Respondent



Next Year

Bar chart of language choice for next year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- HTML/CSS/PHP is losing favour
- JAVA/Javascript/Python gaining favour

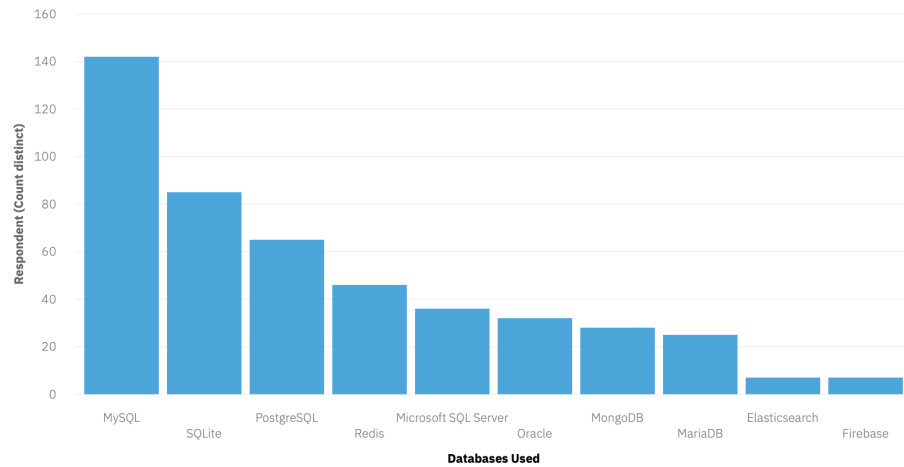
Implications

- Python becoming the most favoured software

DATABASE TRENDS

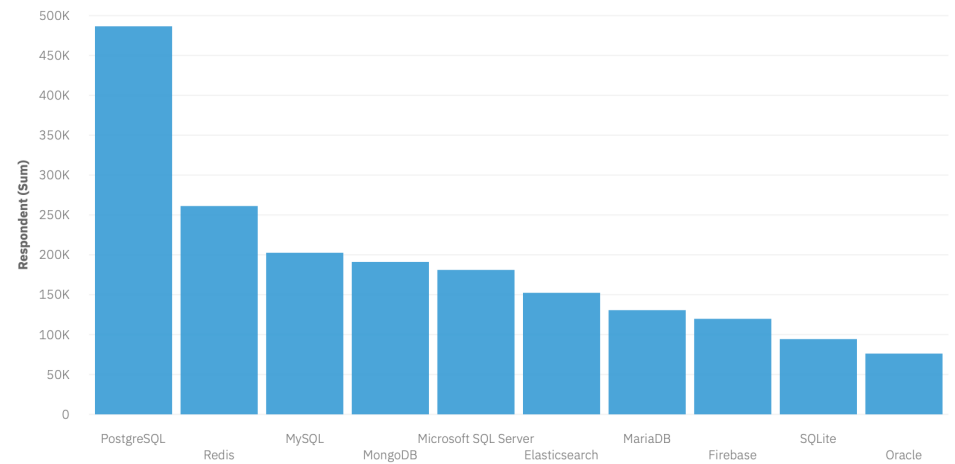
Current Year

Number of Databases by Respondent



Next Year

Column Chart of database choice for next year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is the most favoured DB
- MongoDB/postgreSQL is gaining favour
- Finding 3

Implications

- PostgreSQL to overtake MySQL as the most used DB

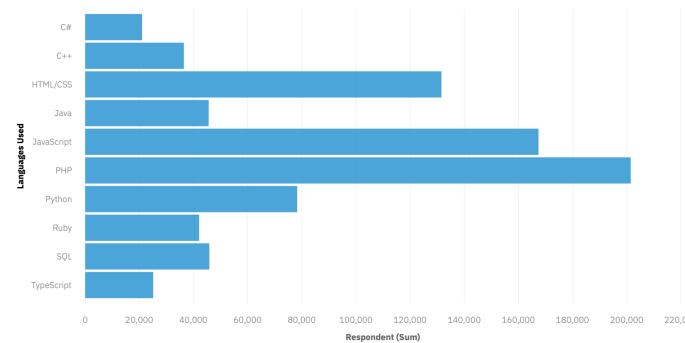
DASHBOARD



<https://eu-gb.dataplatform.cloud.ibm.com/dashboards/a81fef02-fc47-4167-9353-6e2cfbef454c/view/5362d71b31962cef6dc0cce4079e25002b302308b4bb825684807b495a697997f36013c5c87d1d0ede430565f7e9430b9f>

DASHBOARD TAB 1

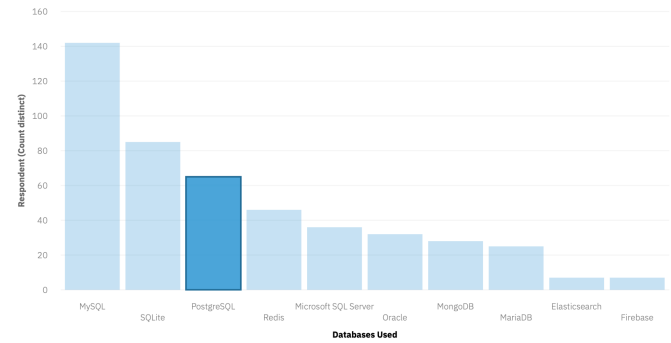
Number of Languages Used by Respondent



Word cloud of Platforms Used



Number of Databases by Respondent

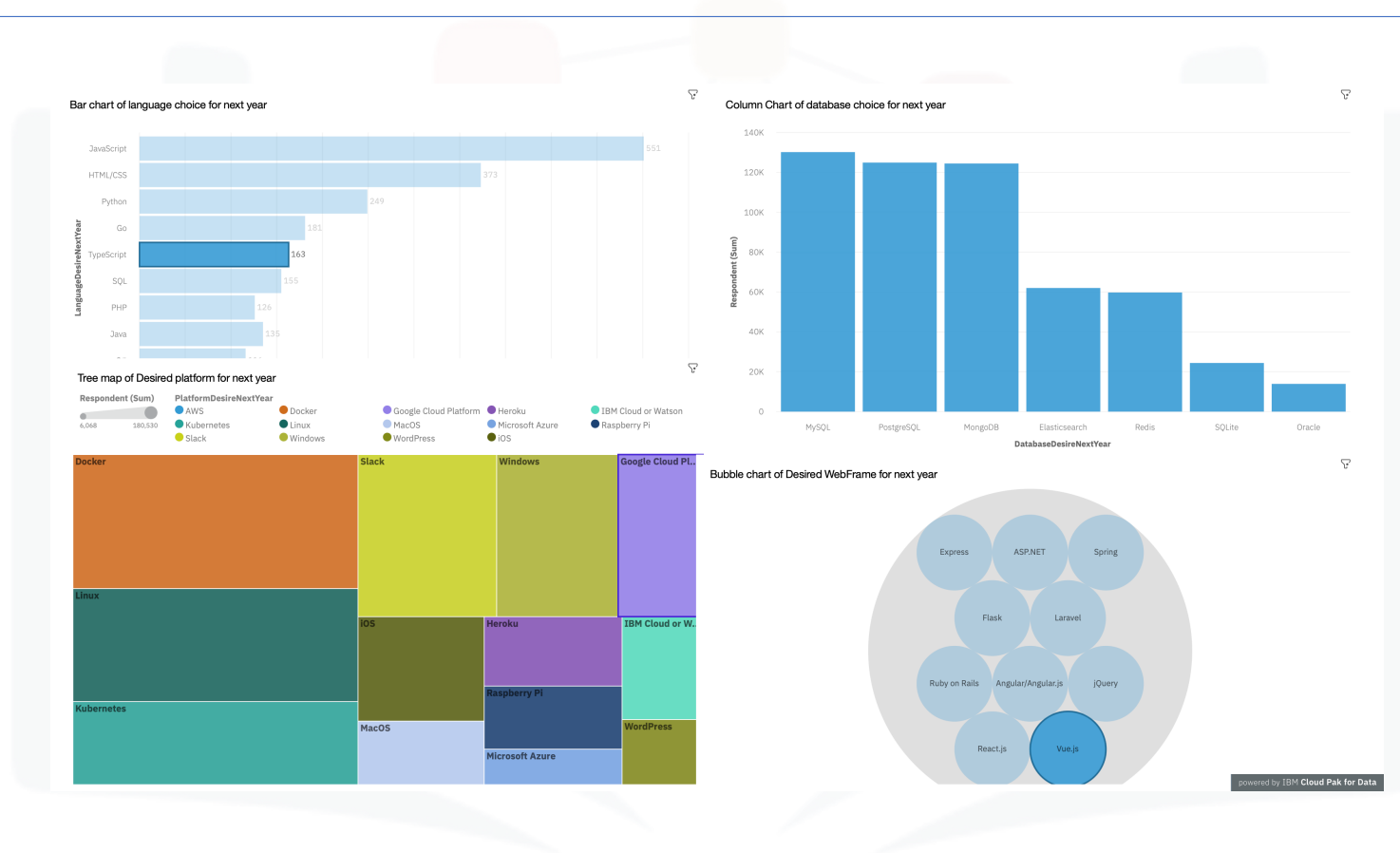


Bubble Chart of WebFrame used



powered by IBM Cloud Pak for Data

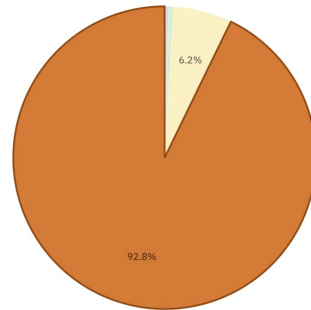
DASHBOARD TAB 2



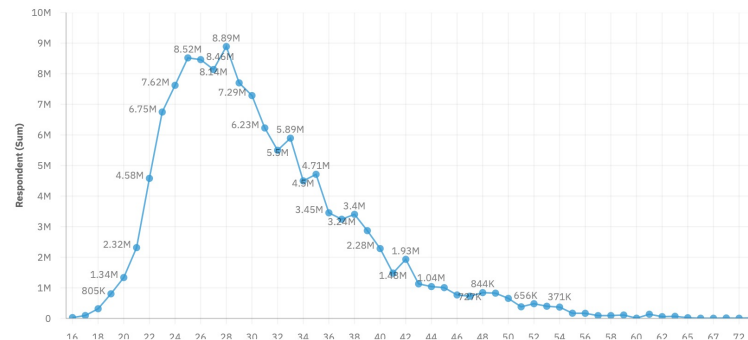
DASHBOARD TAB 3

pie chart of the gender of respondents

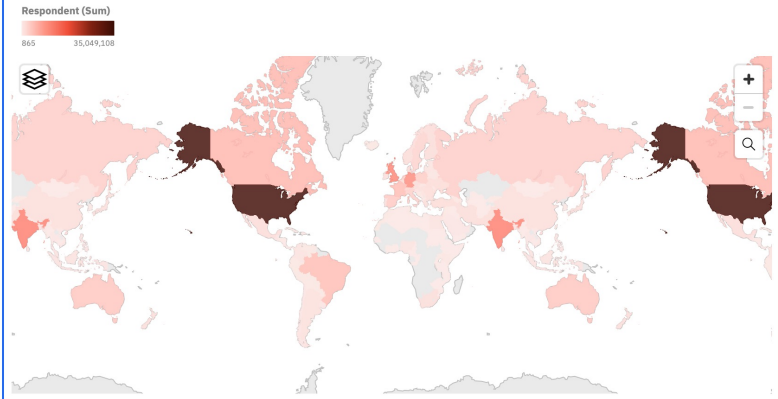
Gender
Woman;Man;Non-binary, genderqueer, or g... Woman;Man
Non-binary, genderqueer, or g... Woman
Woman;Non-binary, genderqueer, or g... Man;Non-binary, genderqueer, or g... Man



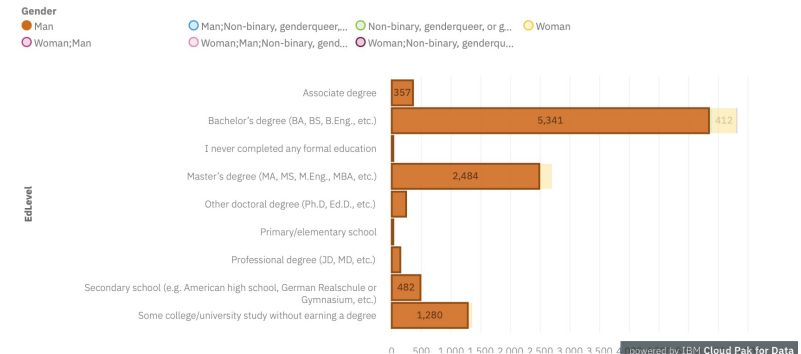
Line chart of age of respondent



geographic location of sum of respondents



Stacked bar chart showing educational level of each gender



DISCUSSION



IBM Developer

SKILLS NETWORK 

OVERALL FINDINGS & IMPLICATIONS

Findings

- Javascript widely used
- Most developers are located in developed countries
- Greater than 90 of developers are men in their 20s with a bachelors degree

Implications

- Not many females in the industry
- Developers leaving the industry after their late 20s

CONCLUSION



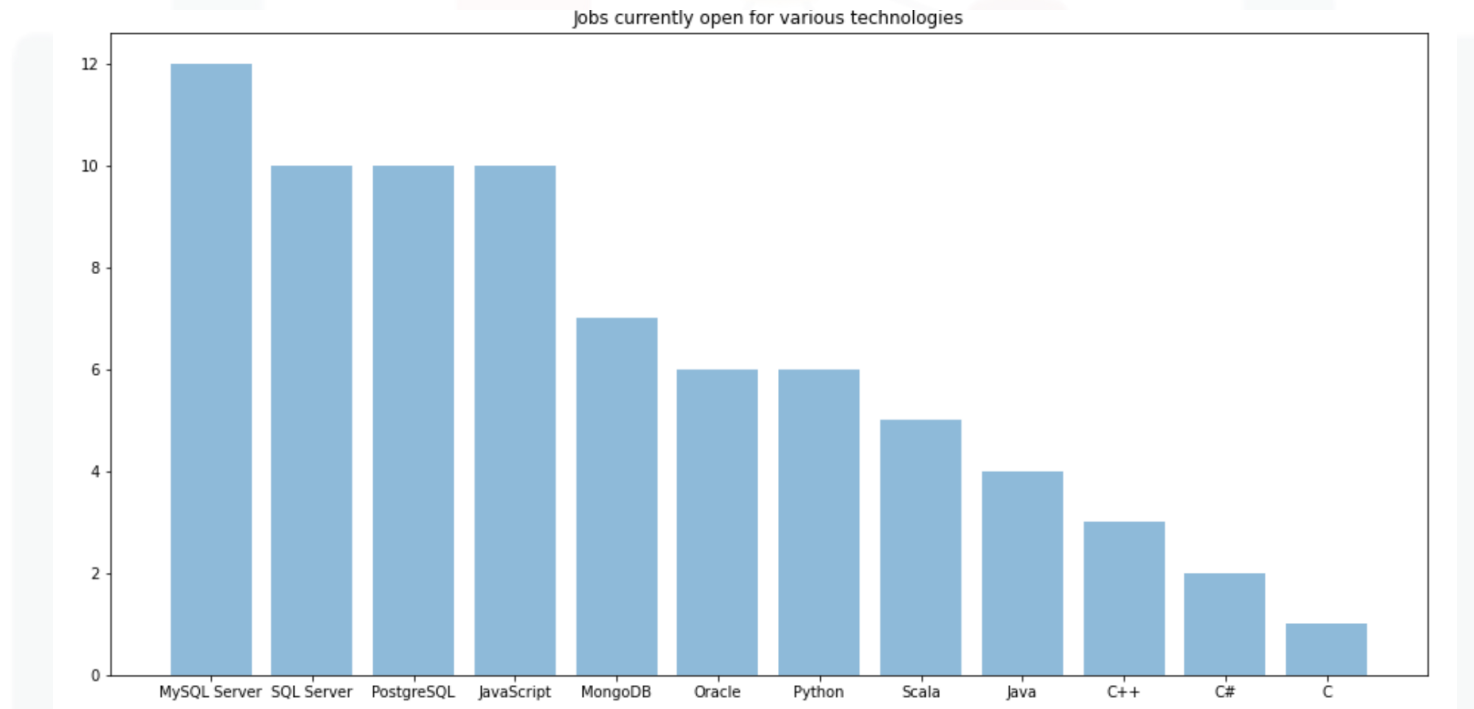
- Work needs to be done to
 - Keep developers in the business
 - Attract females to the industry
 - Encourage engineers from the developing world to become developers

APPENDIX



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

JOB POSTINGS



POPULAR LANGUAGES

