



Trend of Programming

Ben Lehmann

8/23/2024

OUTLINE



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

EXECUTIVE SUMMARY



- Trends in Programming Languages
- Demographic Survey
- Technology gap between Countries
- Gender disparity in Tech Jobs

INTRODUCTION



- Analyzing the trends in Programming and Tech software
- What are the Programming Languages in Demand
- What are the Databases in Demand
- What is the age range in tech jobs

METHODOLOGY



- Data Collection using API and Web Scraping
- Explore the Data using Statistical Analysis
- Data Cleaning using Excel
- Visualizing the Data using Cognos and Excel
- Present the Data

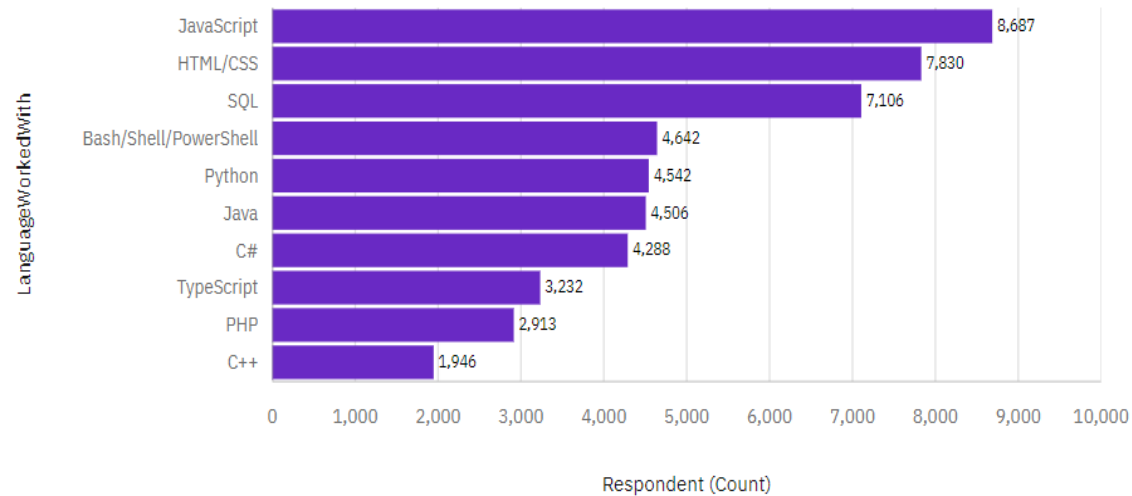
RESULTS

- JavaScript will still be one to most used languages now and in the future
- Python will see a jump in use in the future, still has high usage as of right now.
- SQL will be the same in ranking.
- Linux will still be the most used Software now and in the future
- MySQL will see a decrease (not a big one) in the future, PostgreSQL will overtake in the future
- MongoDB will see the biggest jump in usage in the future, overtaking MySQL
- Microsoft's Database will see a decrease in usage

PROGRAMMING LANGUAGE TRENDS

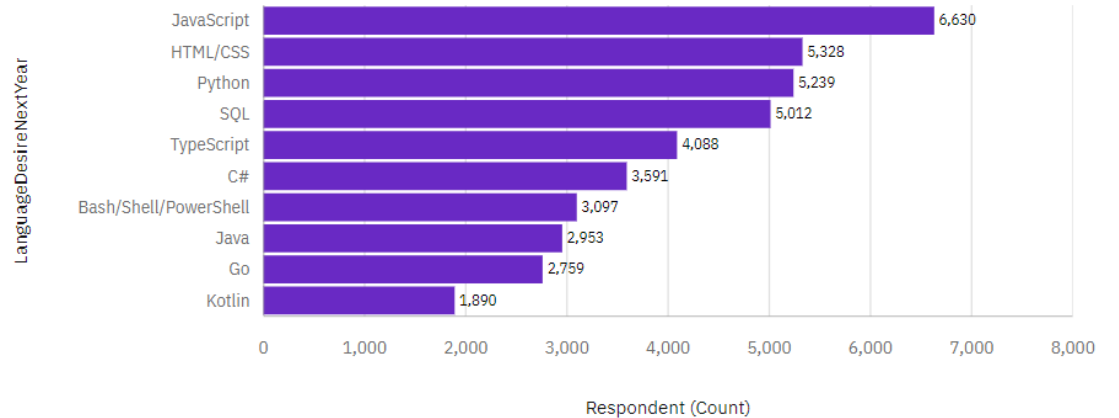
Current Year

Most Utilized Languages



Next Year

Most Desired Programming Languages for Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Javascript is still needed now and in the future
- Python's popularity is growing and will keep growing
- C# will stay consistent, not decrease but no increase either

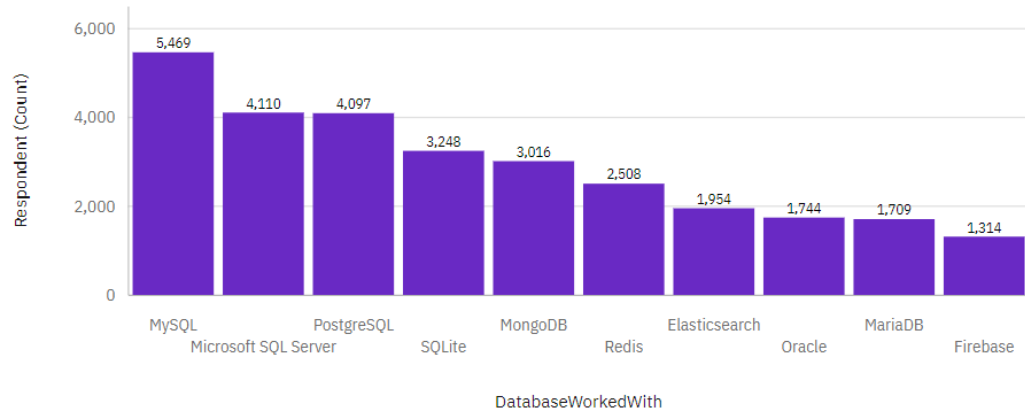
Implications

- Python's language is used in many sectors including AI, leading to increase in demand
- Web Development still needed at every company
- Data Companies need SQL

DATABASE TRENDS

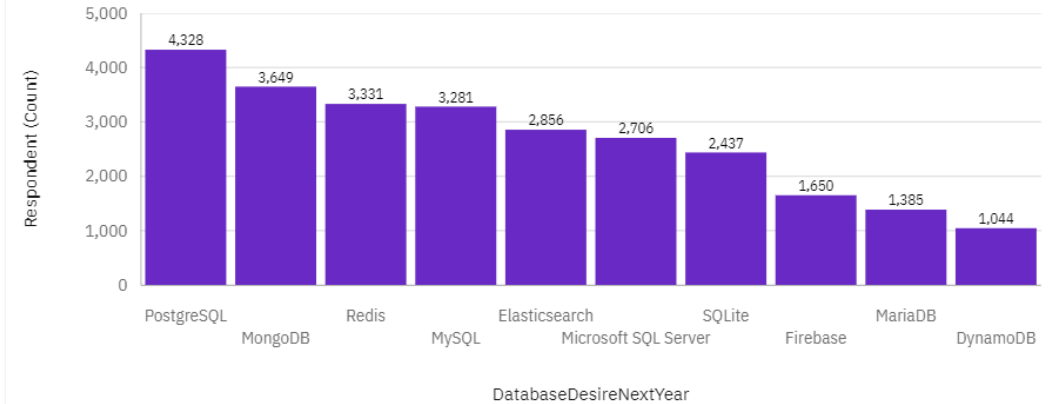
Current Year

Most Used Databases



Next Year

Most Desired Databases for Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is Popular
- MongoDB and PostgreSQL are becoming new favorite
- Redis and SQLite are steady

Implications

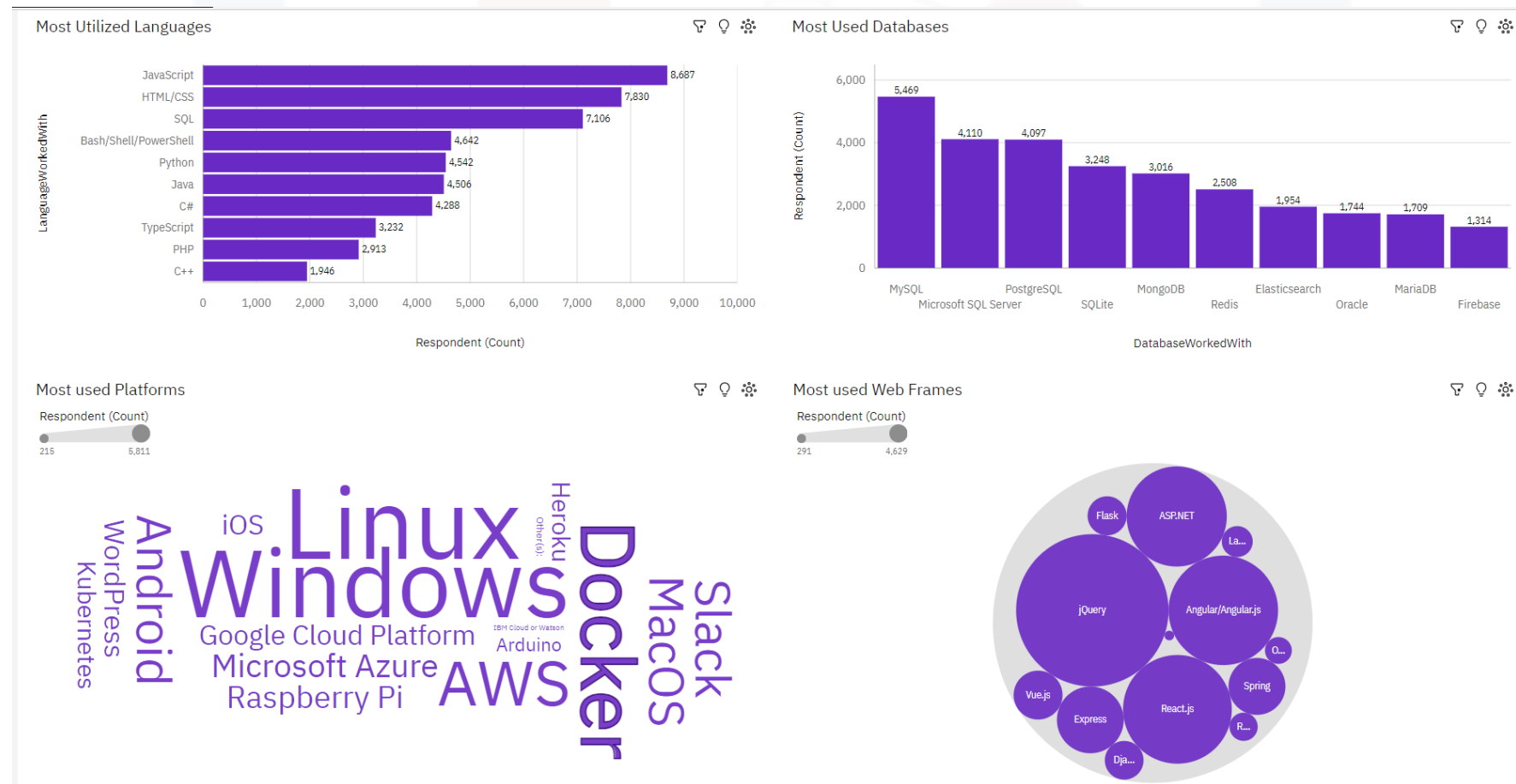
- Databases that are opensource are more popular
- NoSQL Databases are seeing an increase
- Redis support brings popularity

DASHBOARD



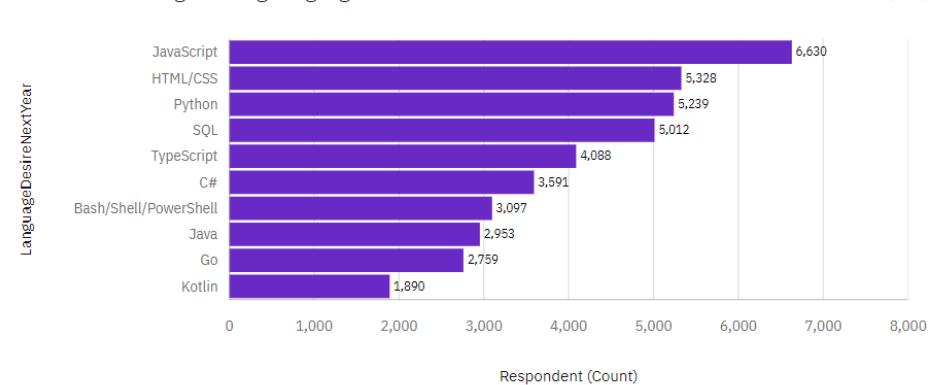
<https://github.com/BenLehmann12/Analyst-Capstone/blob/main/New%20Cognos%20Dashboard.pdf>

DASHBOARD TAB 1

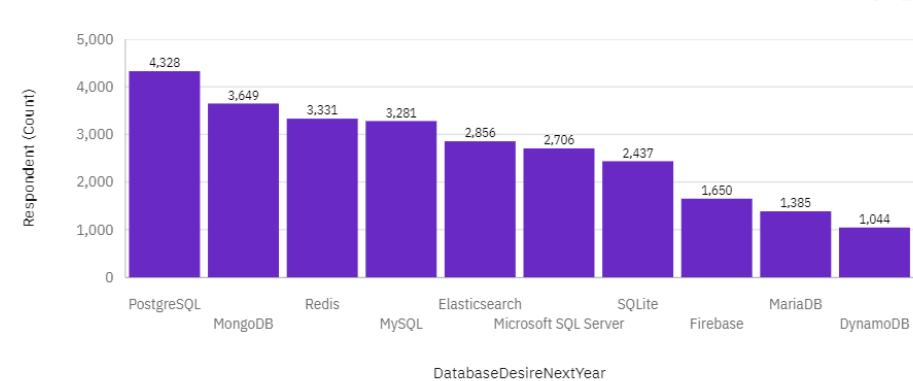


DASHBOARD TAB 2

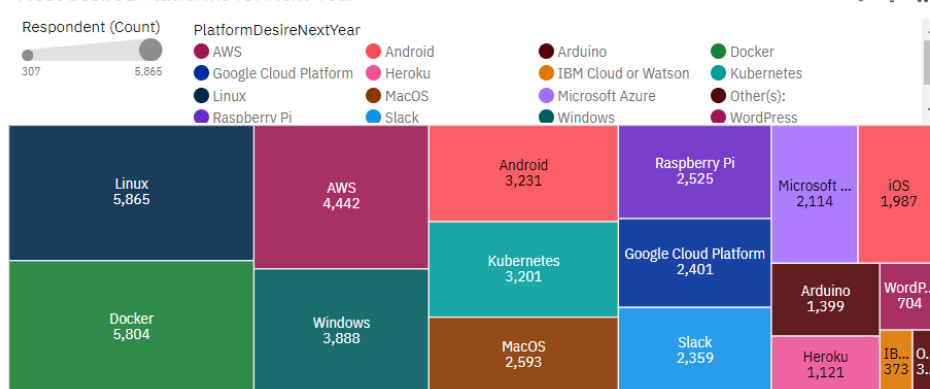
Most Desired Programming Languages for Next Year



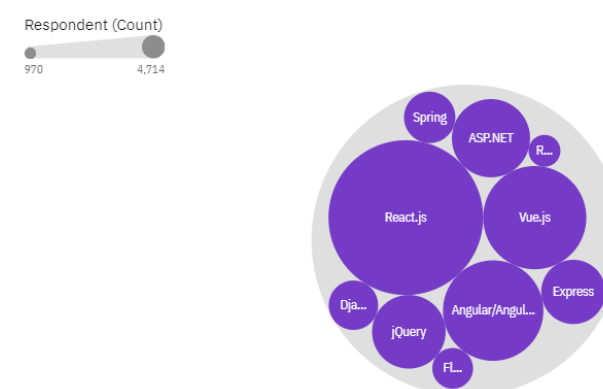
Most Desired Databases for Next Year



Most desired Platforms for Next Year



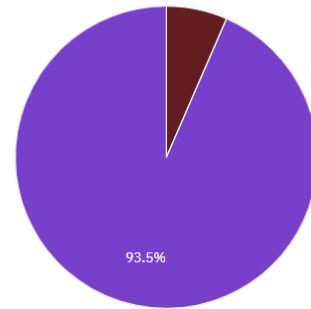
Most Desired WebFrames Next Year



DASHBOARD TAB 3

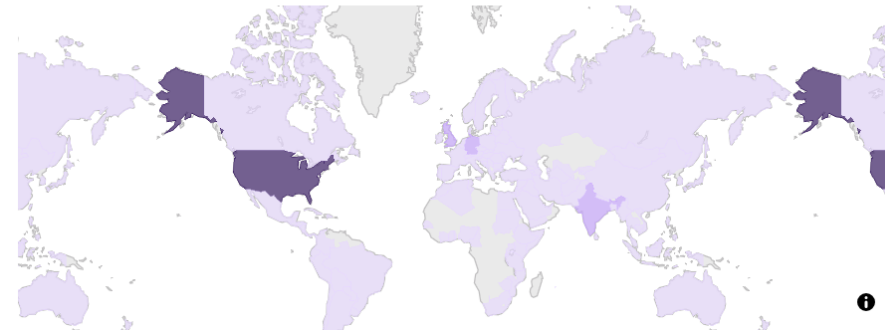
Respondent by Gender

Gender
● Woman ● Man

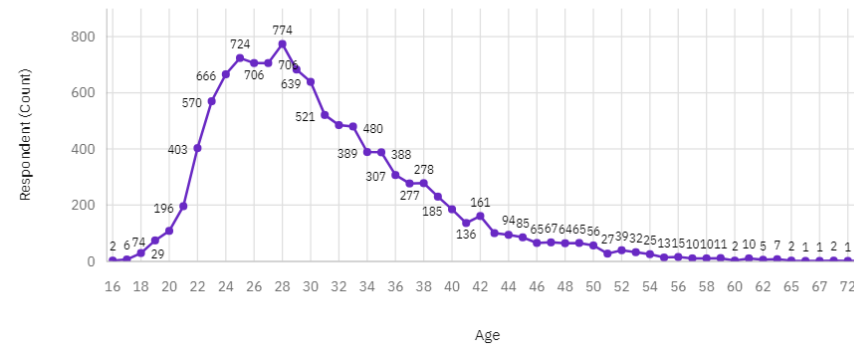


Respondents by Country

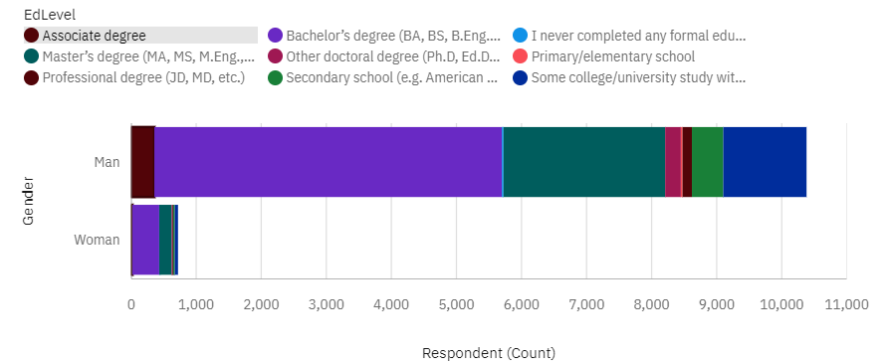
Respondent (Count)
1 3,058



Respondent by Age



Respondent by Gender colored by EdLevel



DISCUSSION



- Most of the respondents range from 24 to 30 years old
- Many are from the United States
- There is Age and Gender discrimination in the Job market
- Linux and Windows are the most used platforms right now
 - Linux will still be mostly used in the future, Docker will take over Windows

OVERALL FINDINGS & IMPLICATIONS

Findings

- There is a Gender Gap in Technology Market
- Docker and AWS see a jump, but Linux is still King
- US and India are the perfect countries for the Technology Job Market

Implications

- Companies need to adjust to ever changing software
- Focus on the Cloud, the cloud is the future
- Help Developing Countries get their hands on technology

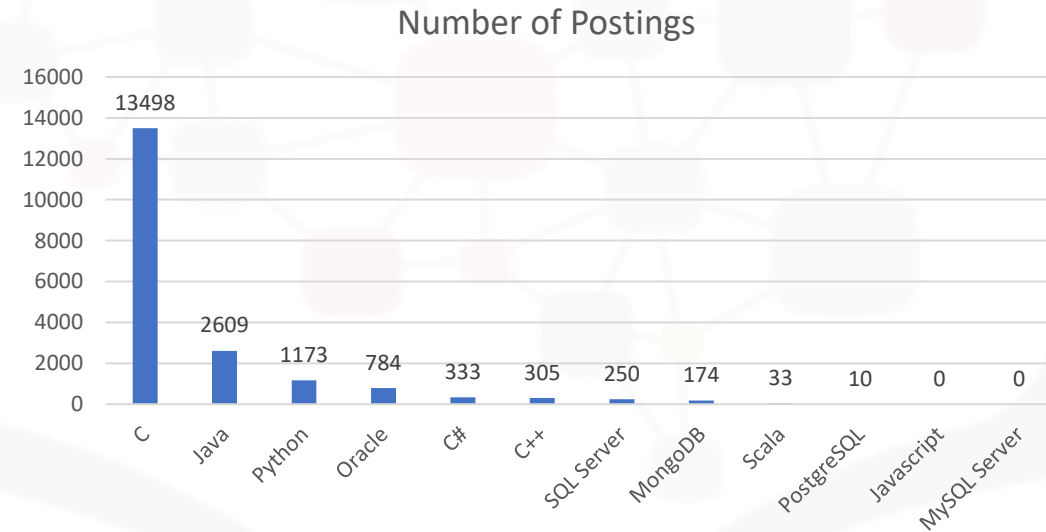
CONCLUSION



- While SQL is used right now, in the future, newer and easy to use Databases will overtake it.
- Python will see a jump in the future, the multiuse of the language is a big reason
- Because of millions of websites depend on JavaScript, the language will still be near the top for years to come.
- In Technology there is a demographics gap

JOB POSTINGS

Number of Postings by Jobs



POPULAR LANGUAGES

Average Salary by Language

