



The Present and Future of Programming

- Mr. Kuldip Ranavaya
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OUTLINE



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

EXECUTIVE SUMMARY



- Collecting Data of Various Jobs from Different Platforms
- Analyzing the Data and Identifying the current and future trends
 - Top 10 Programming Languages
 - Top 10 Databases
 - Popular IDE platforms
- Representing extracted information using Dashboards showing Current Skills, Future Skills and Demography

INTRODUCTION



- Keeping up the pace with ever-changing technology is significant to expertise in Programming
- The Focus of the report is
 - What are the current trend of programming languages and database in different regions?
 - Predicting the future of programming languages and databases for different regions.

METHODOLOGY



- Data Collection
- Data Wrangling
- Data Analysis
- Data Visualization
- Presentation of Findings
- Data Sources : Job Posting, Training Portals and Surveys
 - <https://www.kaggle.com/datasets/promptcloud/jobs-on-naukricom>
 - https://cf-courses-data.s3.us.cloud-object-storage.appdomain.cloud/IBM-DA0321EN-SkillsNetwork/labs/datasets/Programming_Languages.html
 - https://cf-courses-data.s3.us.cloud-object-storage.appdomain.cloud/IBM-DA0321EN-SkillsNetwork/LargeData/m1_survey_data.csv

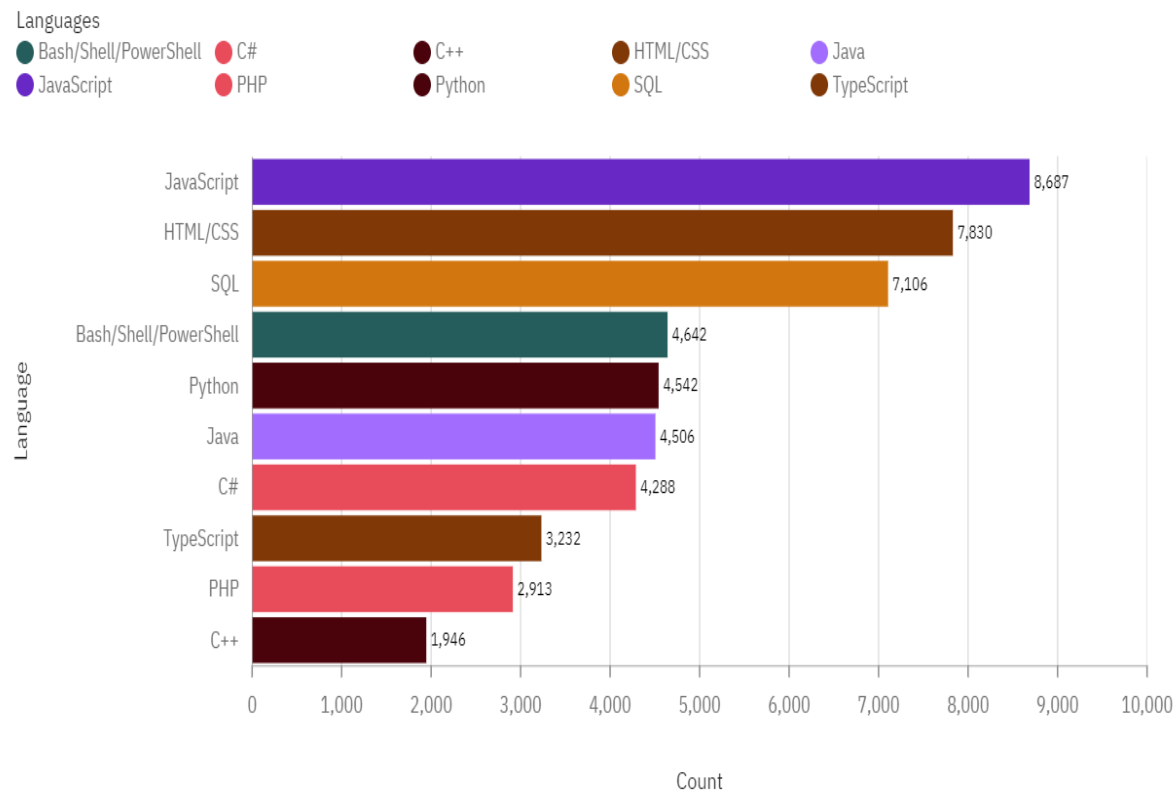
RESULTS

The Collected Data is now transferred for cleaning and then different statistical methods are applied to analyze data. After that, the final report is concluded.

PROGRAMMING LANGUAGE TRENDS

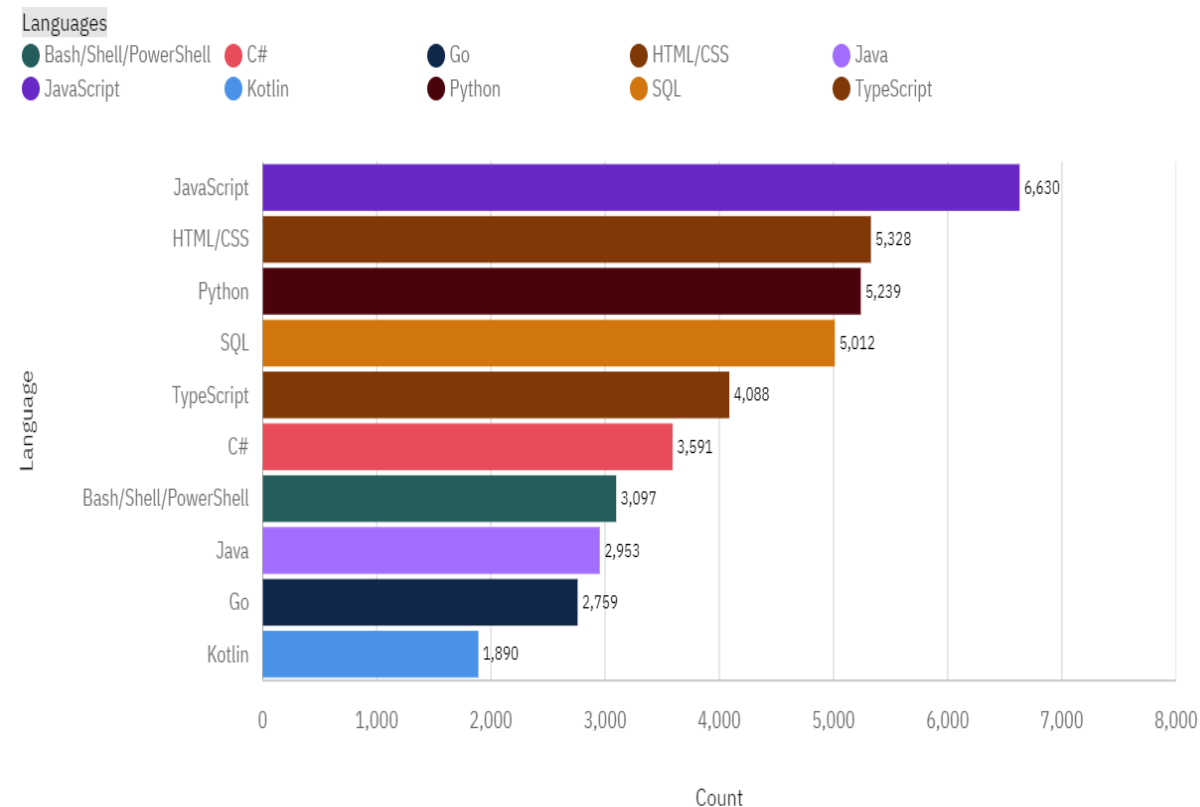
Current Year

Top 10 Languages Worked With



Next Year

Top 10 Language Desire Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- **JavaScript (17.5 %)**, is the most frequently used Language followed by **HTML/CSS(15.8 %)**.
- **SQL(14.3 %)** is currently at third place but will be replaced by python in future.
- **Bash/Shell/PowerShell** is in Top 5 but will see the downfall

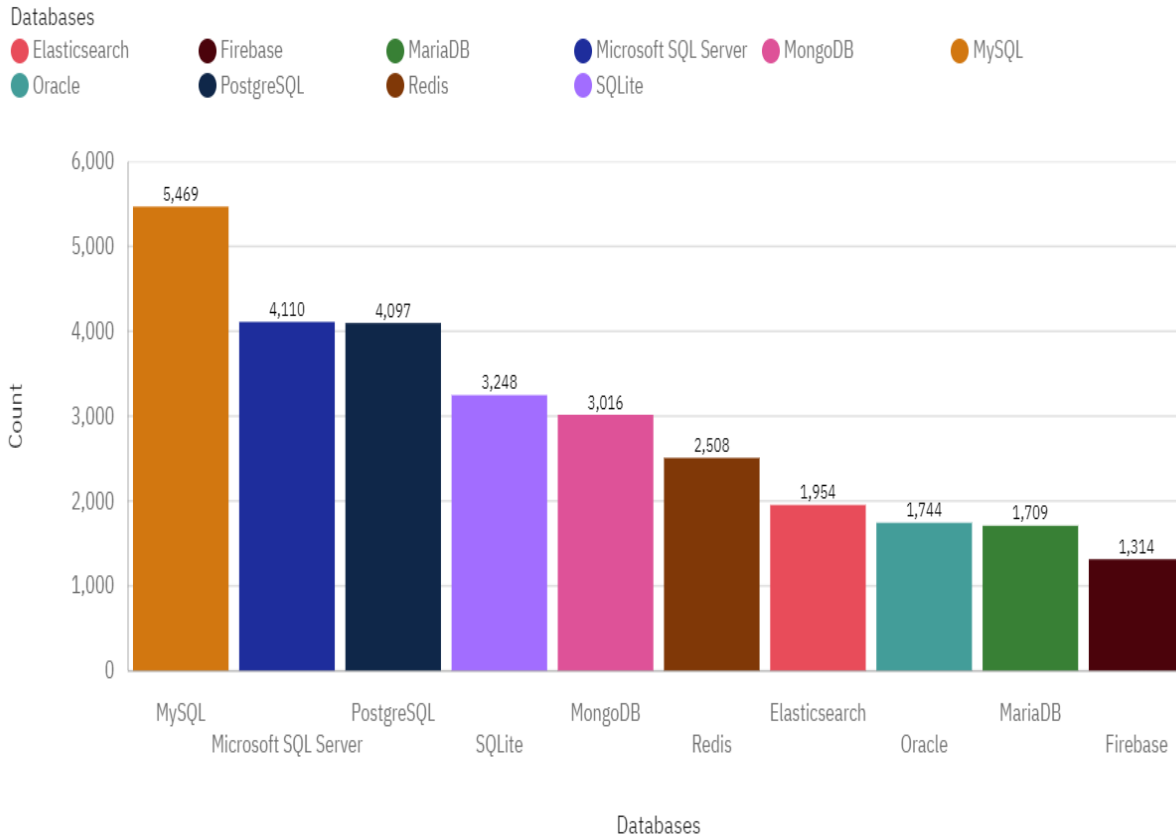
Implications

- **JavaScript and HTML/CSS** will be most desired Languages in future as well.
- **Python** will take third place in future, but **SQL** will still be in the trends
- **TypeScript** will be more popular in the future

DATABASE TRENDS

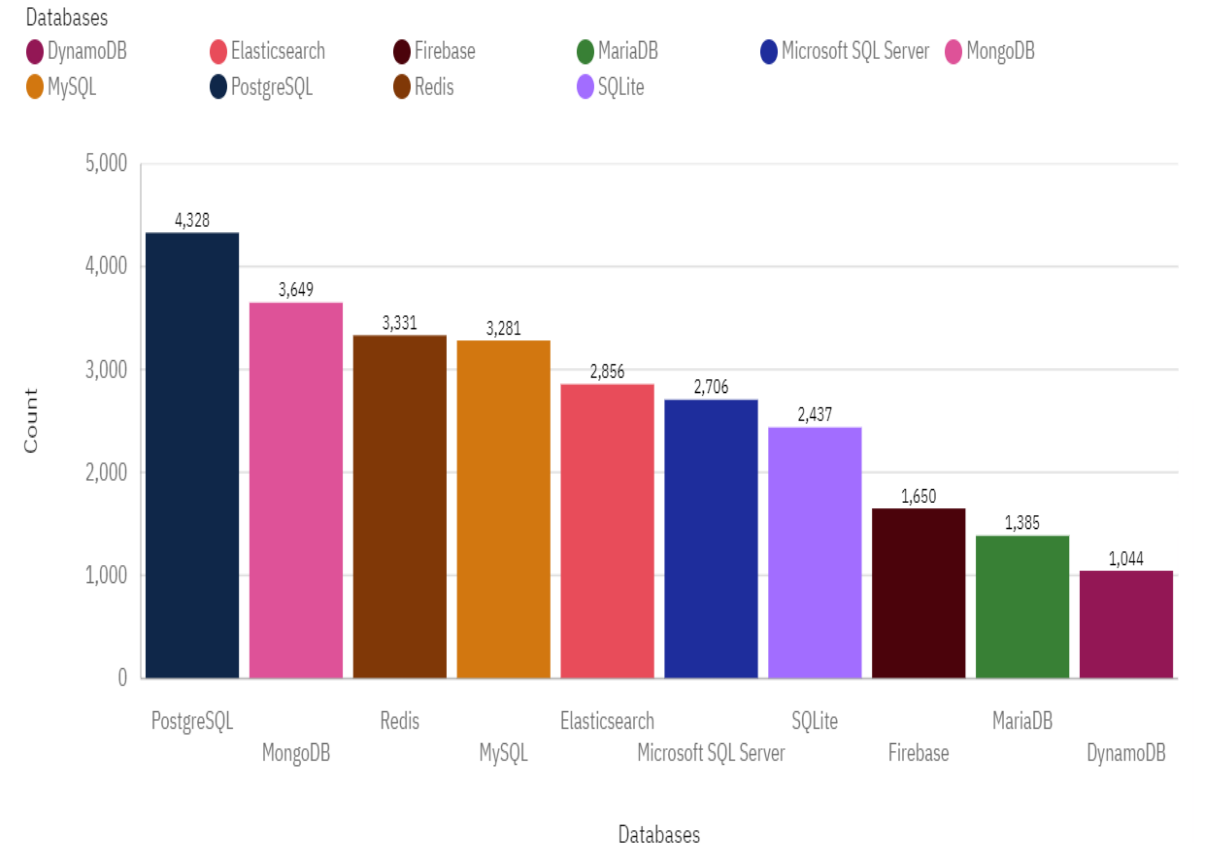
Current Year

Top 10 Database Worked With



Next Year

Top 10 Database Desire Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- **MySQL(18.7 %)** is the most frequently used database followed by **Microsoft SQL server**.
- **PostgreSQL** will see the rise in the user and will be the most used language in the future

Implications

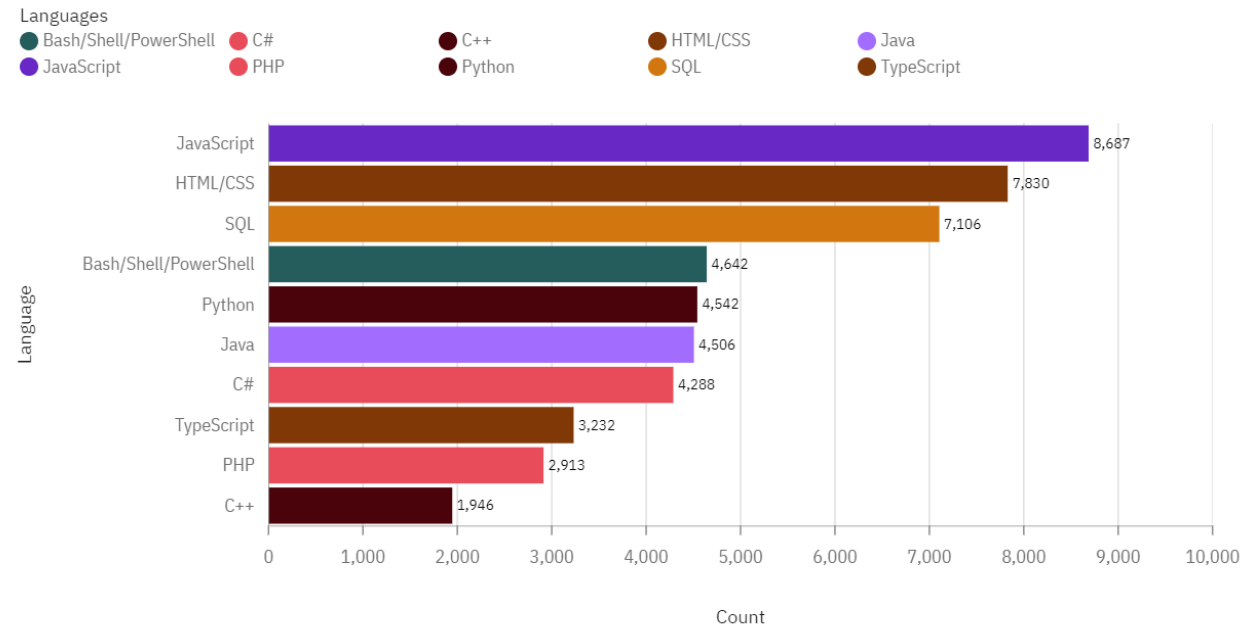
- In the Future **MySQL** will lose its top place to 4th place.
- **MongoDB** and **Redis** will be 2nd and 3rd place respectively replacing **sqlite** and **Microsoft SQL server**
- **Elasticsearch** will be in the top 5 in future.

DASHBOARD

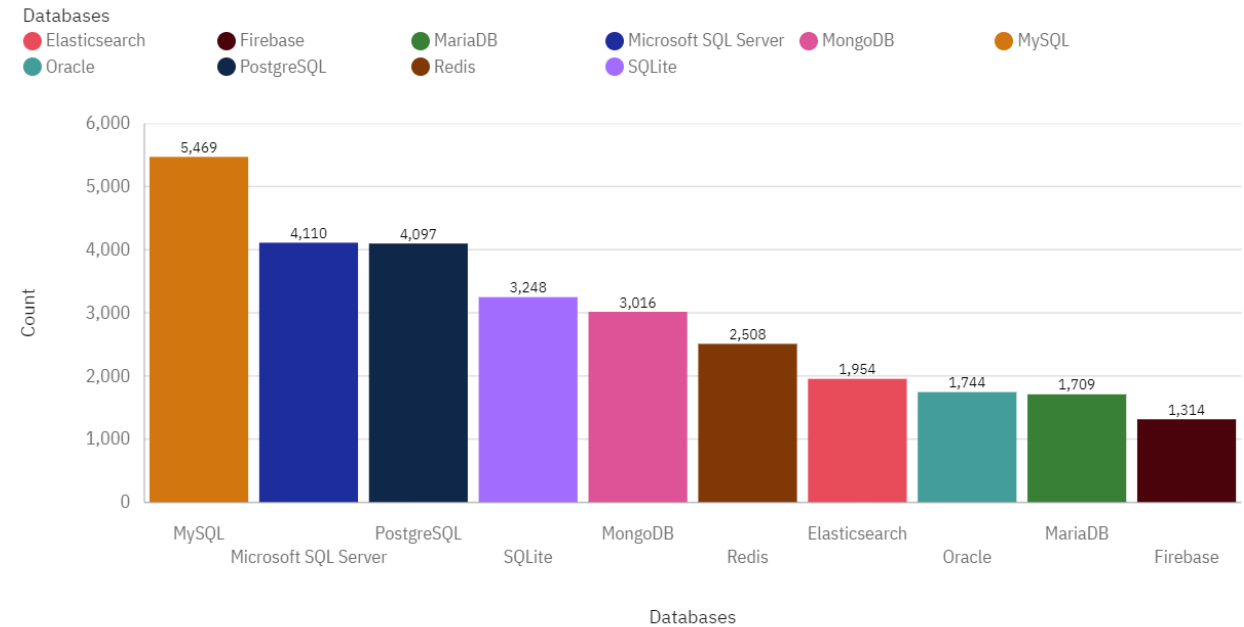


[The GitHub Link for Cognos Dashboard](#)

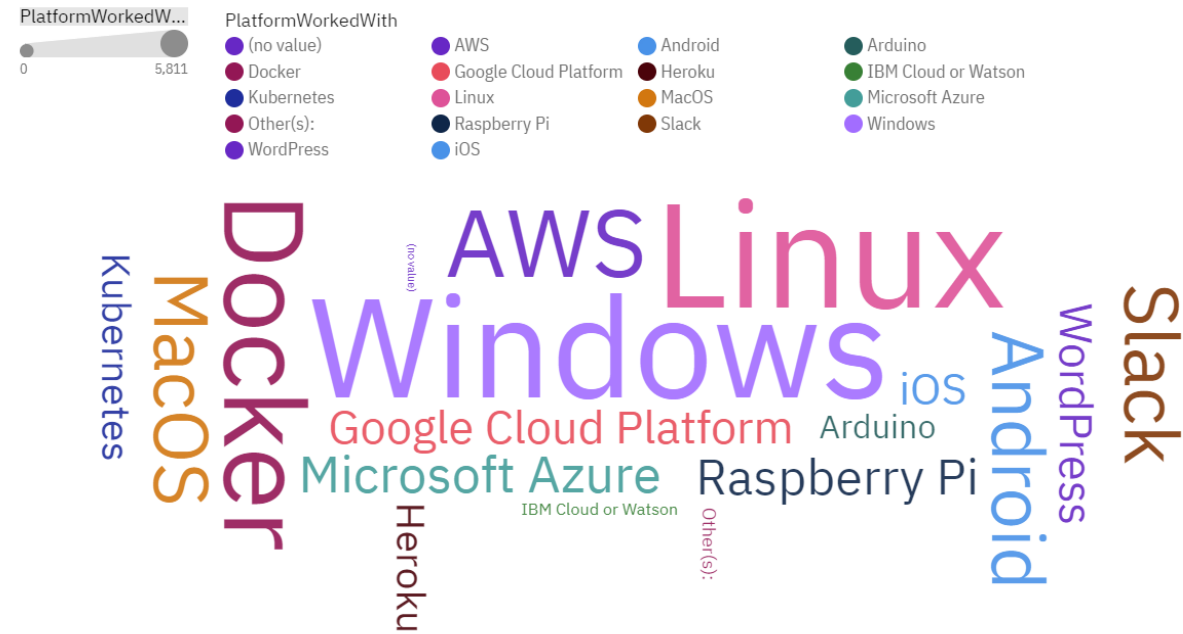
Top 10 Languages Worked With



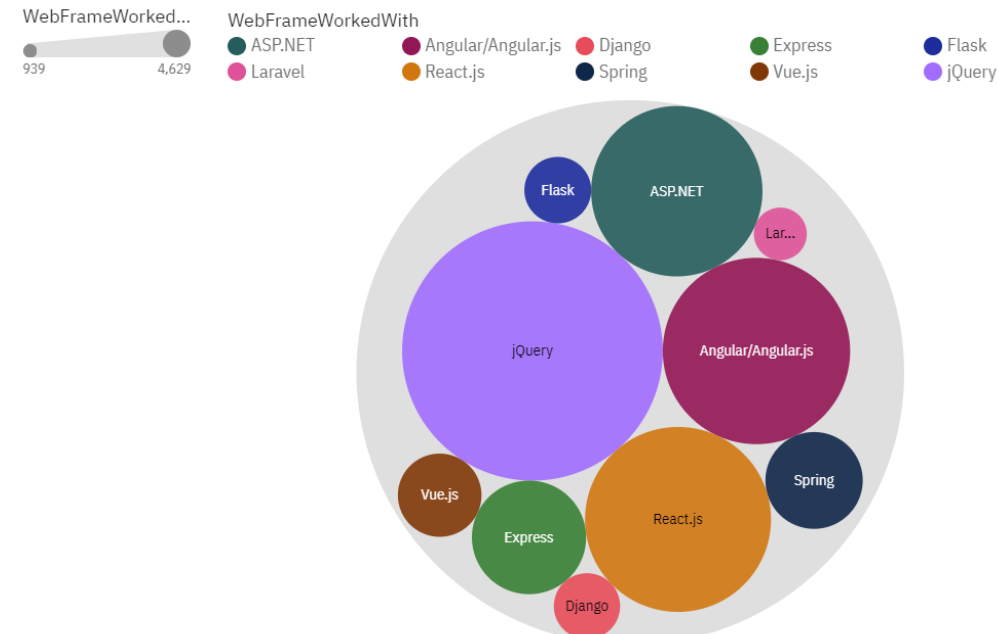
Top 10 Database Worked With



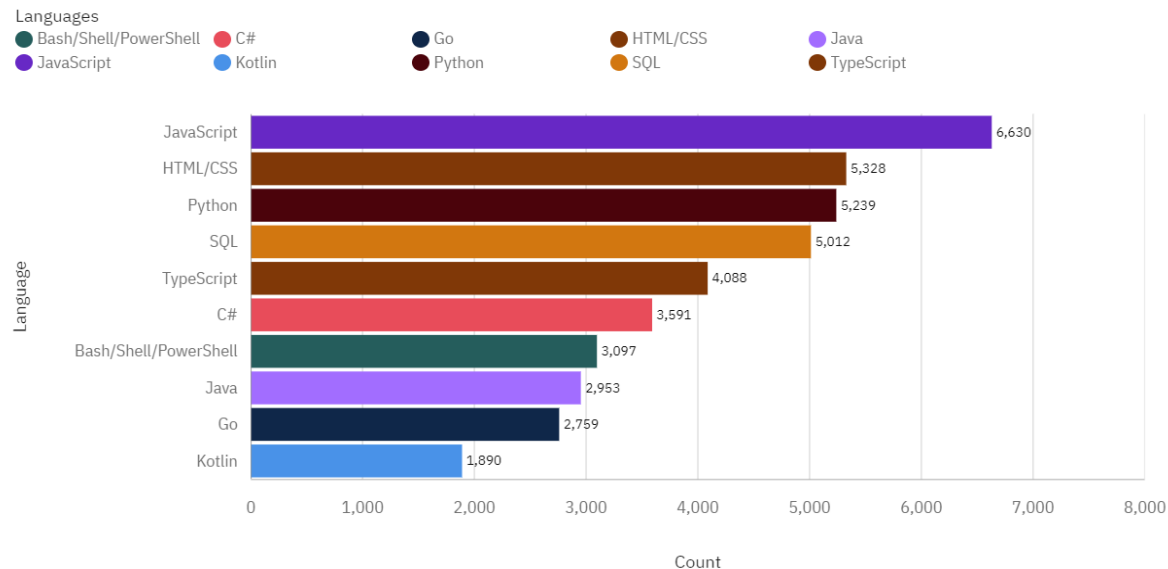
Platform Worked With



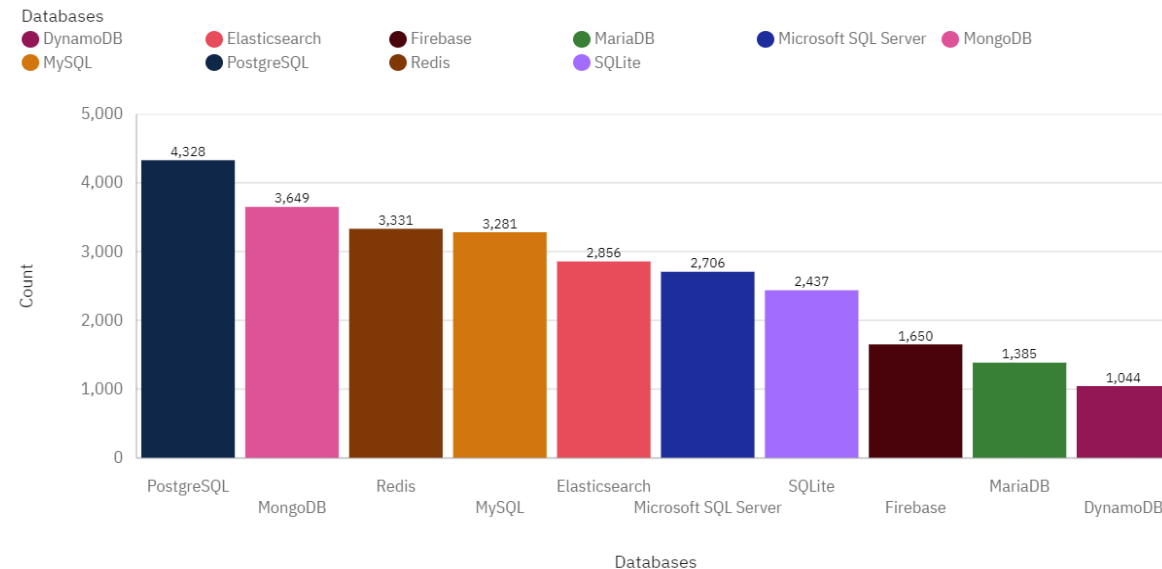
Top 10 WebFrame Worked With



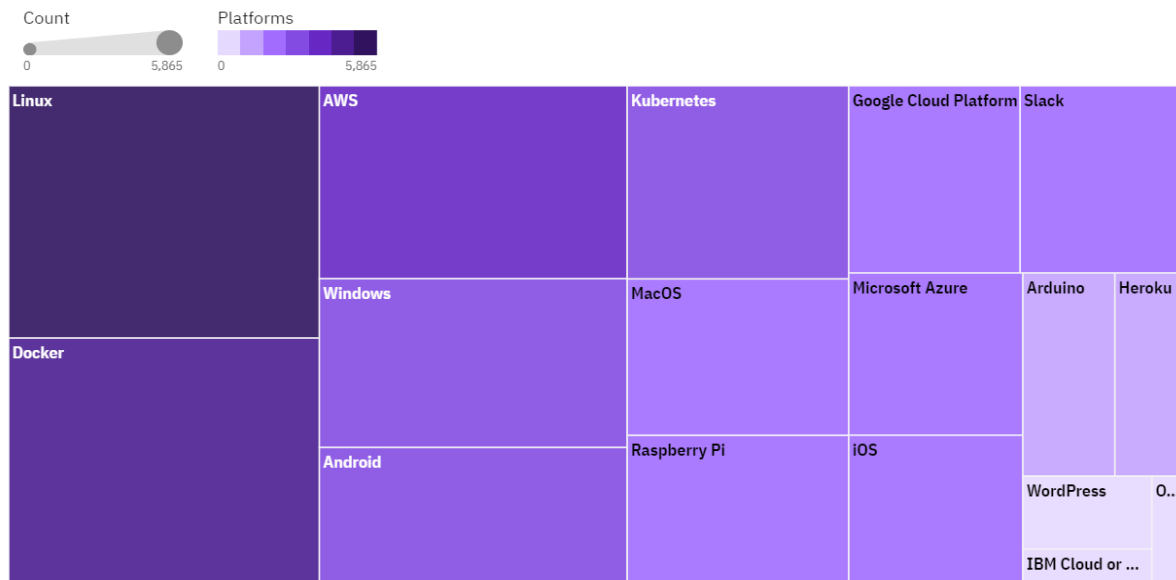
Top 10 Language Desire Next Year



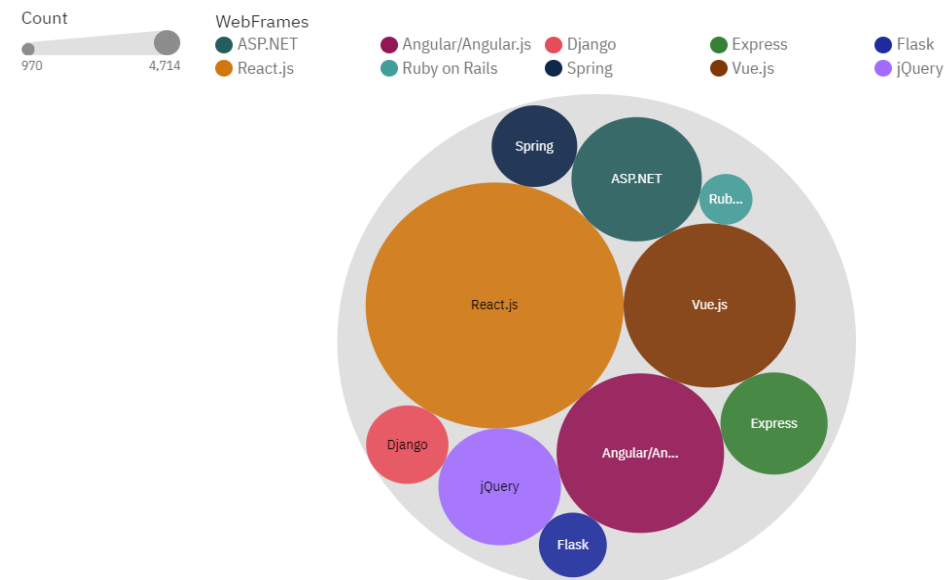
Top 10 Database Desire Next Year



Platform Desire Next Year

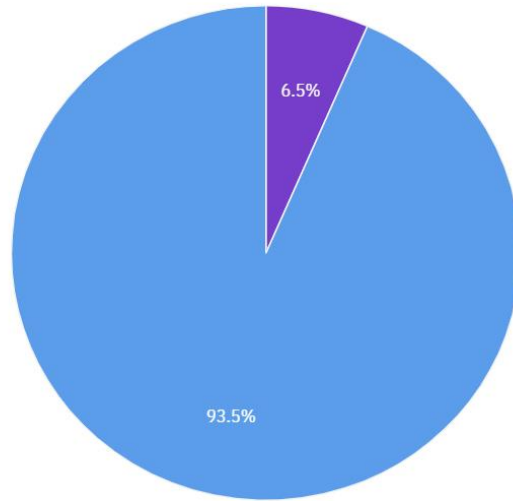


Top 10 WebFrame Desire Next Year



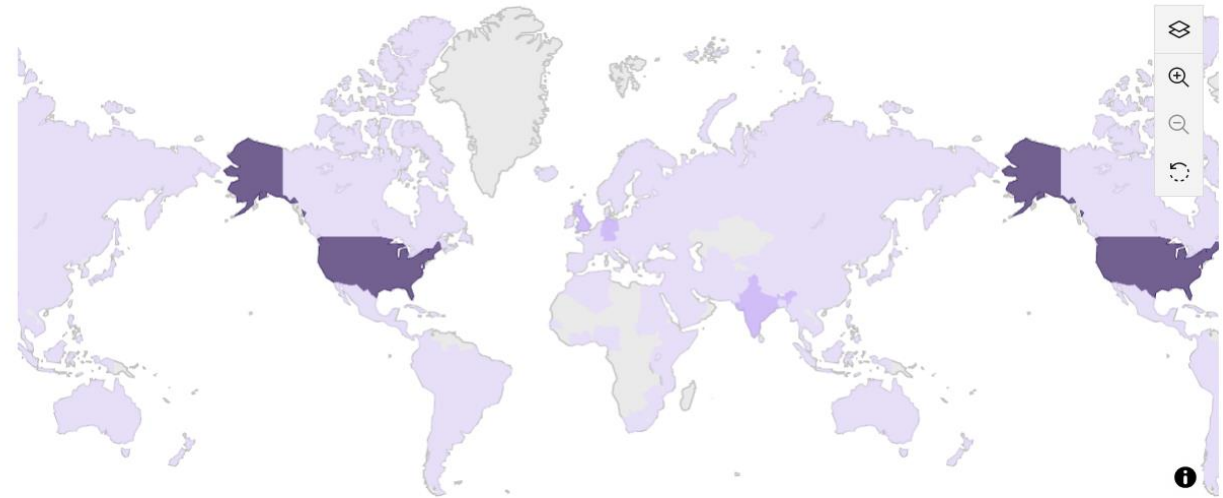
Respondent Percentage by Gender

Gender
 ● Woman ● Man

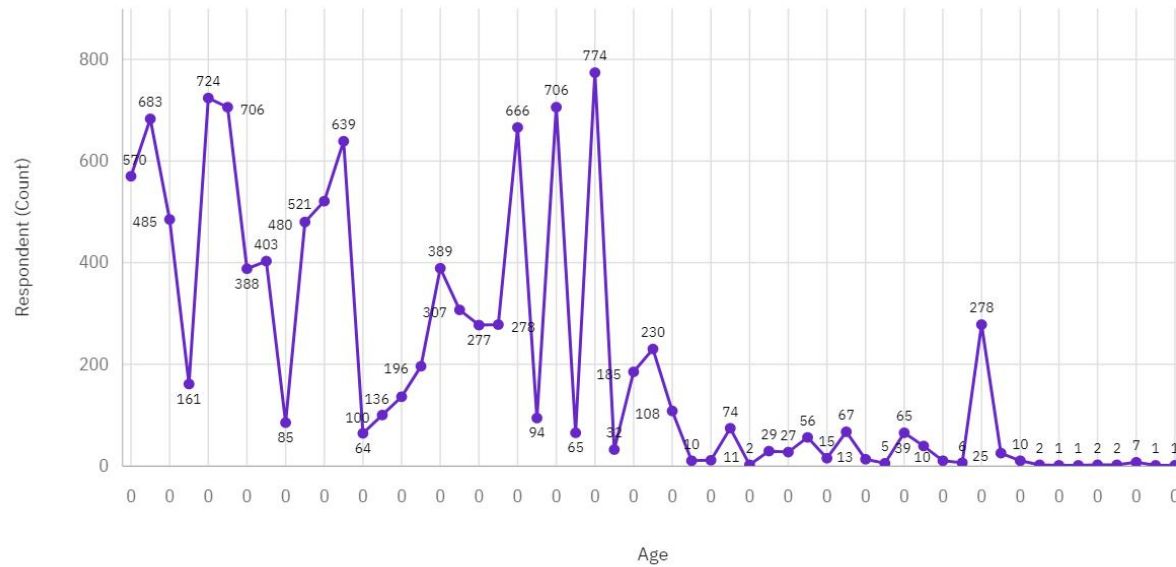


Respondent Count for Country

Respondent (Count)
 1 3,058



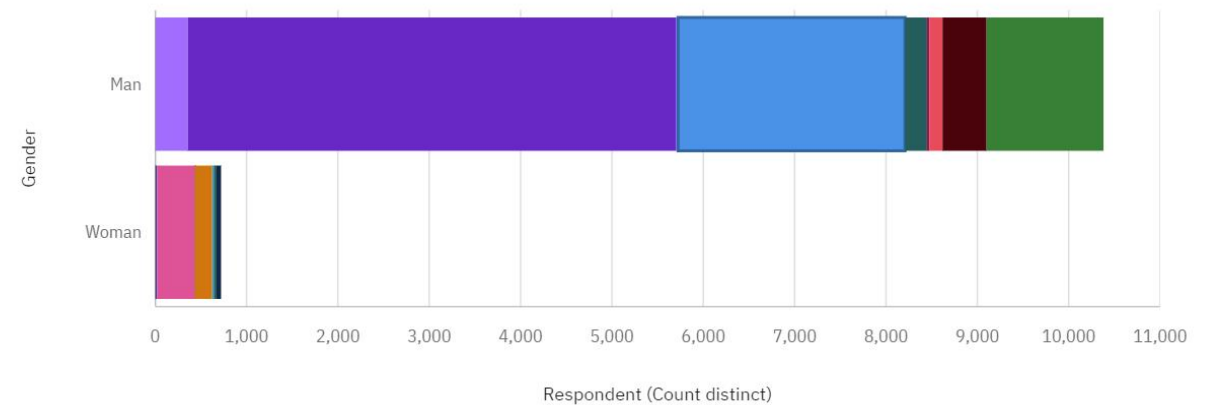
Respondent Count by Age



Respondent Count by Gender, classified by Formal Education Level

Gender - EdLevel

- Man | Associate degree
- Man | Bachelor's degree (BA, BS, ...)
- Man | Master's degree (MA, MS, M...)
- Man | Professional degree (JD, M...)
- Man | Other doctoral degree (Ph....)
- Man | Primary/elementary school
- Man | Secondary school (e.g. Ame...)
- Man | Some college/university stu...
- Man | I never completed any form...
- Woman | Associate degree
- Woman | Bachelor's degree (BA, ...)
- Woman | Master's degree (MA, M...)
- Woman | Other doctoral degree (...)
- Woman | Professional degree (JD,...)



DISCUSSION



- Women ratio compared to Man in IT
- What are the key points that makes JavaScript so much popular?
- Reason for downfall in popularity of Bash/shell/PowerShell and Microsoft SQL Server
- Rising Popularity of MongoDB

OVERALL FINDINGS & IMPLICATIONS

Findings

- **JavaScript** and **HTML/CSS** is and will be the most popular languages in future.
- **SQL** will be surpassed by **Python** in future.
- **PostgreSQL** is presented to be 1st instead of **MySQL**.
- **Microsoft SQL Server** and **SQLite** is losing popularity
- **Linux** platform is top, but **Windows** will be replaced by **Docker** in future
- **ReactJs** is predicted highest used web frame replacing **jQuery**
- Respondent ration of Men are very high compared to Women and area of study is Bachelor's degree

Implications

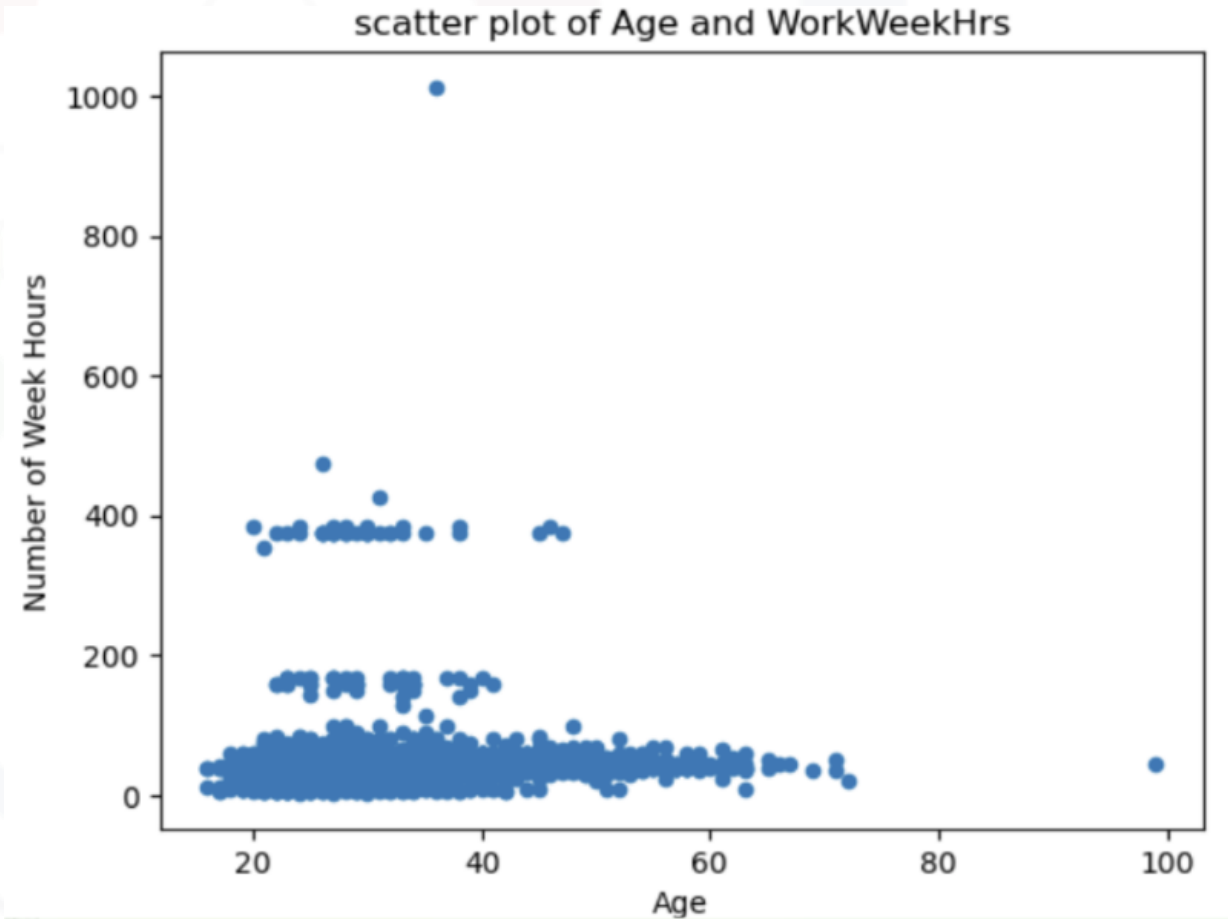
- **JavaScript** and **HTML/CSS** is and will be the 1st and 2nd desired languages in future.
- **Python** is gaining popularity in the future
- **MySQL** will be required but **PostgreSQL** will be more popular
- **Linux** platform and **Docker** has almost similar ration of users.
- The Demand of **jQuery** is decreasing
- It is assumed that large number of Russian men who have bachelor's degree is interested in Respondent

CONCLUSION

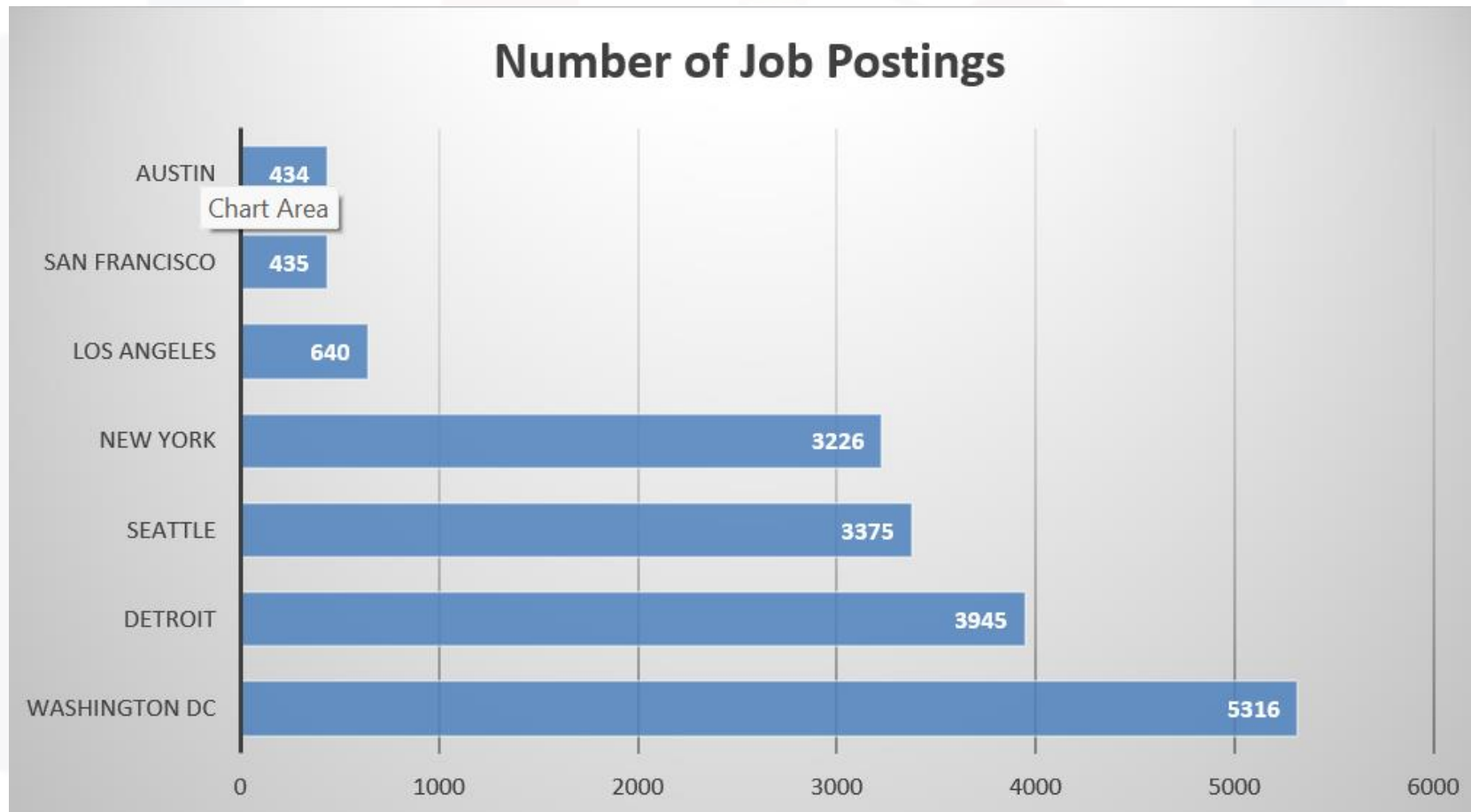


- Men are interested more in IT than Women
- **JavaScript** and **HTML/CSS** is and will stay popular in future as well
- **PostgreSQL** will be more in demand database
- **Linux** platform will be used same n will hold the first place
- The most percentage of web frames will be acquired by **ReactJs**

APPENDIX



JOB POSTINGS



POPULAR LANGUAGES

