



# Data Analyst Capstone

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25<sup>th</sup> December 2023

# OUTLINE



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

# EXECUTIVE SUMMARY



- ▶ Two type Data Download from API.
- ▶ **Current Technology Usage**
  - ▶ Top 10 Language worked
  - ▶ Top 10 Database worked
  - ▶ Platform Worked
  - ▶ Top 10 Web Frame worked
- ▶ **Future Technology Trend**
  - ▶ Top 10 Language Desire Next Year
  - ▶ Top 10 Database Desire Next Year
  - ▶ Platform Desire Next Year
  - ▶ Top 10 Web Frame Desire Next Year
- ▶ **Demographics**
  - ▶ Respondent classified by Gender
  - ▶ Respondent Count for Countries
  - ▶ Respondent Count by Age
  - ▶ Respondent Count by Gender, classified by Formal Education Level

# INTRODUCTION



- ✓ Collect data for the technology skills that are in demand from various sources including: Job postings, blog posts, surveys.
- ✓ collected enough data, you will begin analyzing the data and identify insights and trends that may include the following
  - ✓ What is the top programming languages in demand.
  - ✓ What is the top database skills in demand.
  - ✓ What is the popular IDEs
  - ✓ Show off your storytelling skills by sharing your findings in a presentation.

# METHODOLOGY



- ▶ Collecting Data Using APIs
- ▶ Collecting Data Using Webscraping
- ▶ Exploring Data
- ▶ Collected data and prepare it for analysis by using data wrangling techniques like:
  - ▶ Finding duplicates
  - ▶ Removing duplicates
  - ▶ Finding missing values
  - ▶ Inputting missing values.
- ▶ Data Visualization and apply statistical techniques to analyze the data and identify insights and trends like :-  
Top programming languages, Top Database skills and the most popular IDEs.
- ▶ Also Visualize the data in Cagnos and create Dashboard.

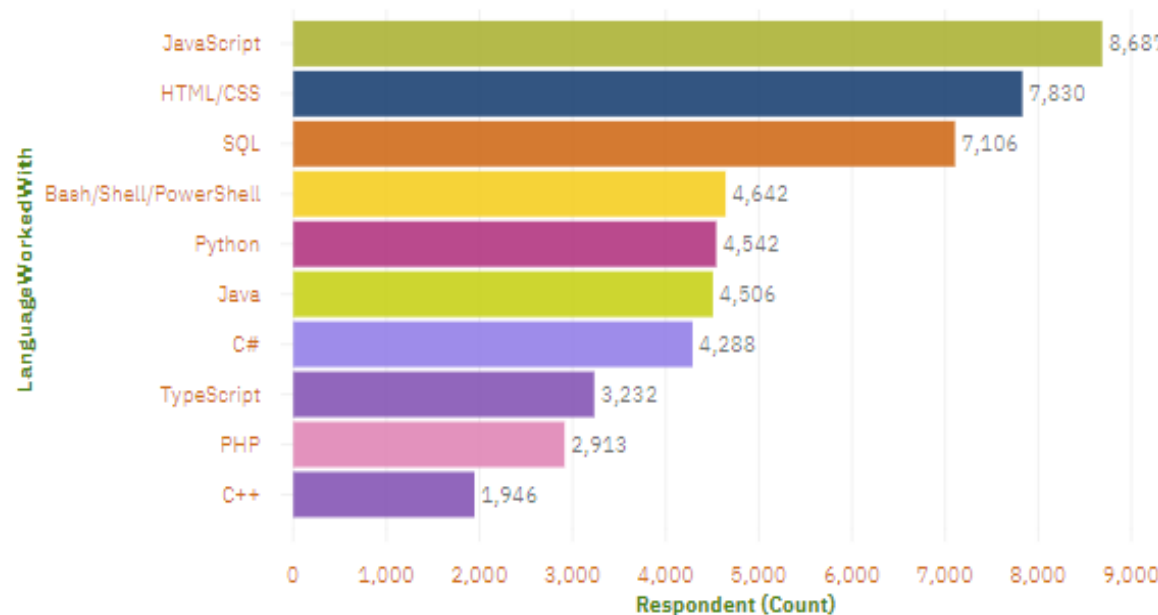
# RESULTS

1. Top 10 Language is JavaScript, HTML/CSS, SQL, Bash/Shell/PowerShell, Python, Java, C, Typescript, PHP and C++ .
2. Top 10 Database is MySQL, PostgreSQL, Microsoft SQL Server, SQLite, MongoDB, Redis, Elastic search, Maria DB, Oracle and Firebase.
3. Windows is a good platform.
4. Top 10 Web frame is :- jQuery, Angular.js, React.js, ASP.NET, Express, Spring, Vue.js, Flask, Django and Laravel.
5. JavaScript, HTML/CSS and Python is top language desire for next year.
6. PostgreSQL, MongoDB and Redis is top in database desire for next year.
7. Linux and Docker will top in platform desire.
8. React.js is in top for web frame.
9. Men with bachelor's degree(BA, BS, B.Eng..) is the highest percentage in respondent classification.

# PROGRAMMING LANGUAGE TRENDS

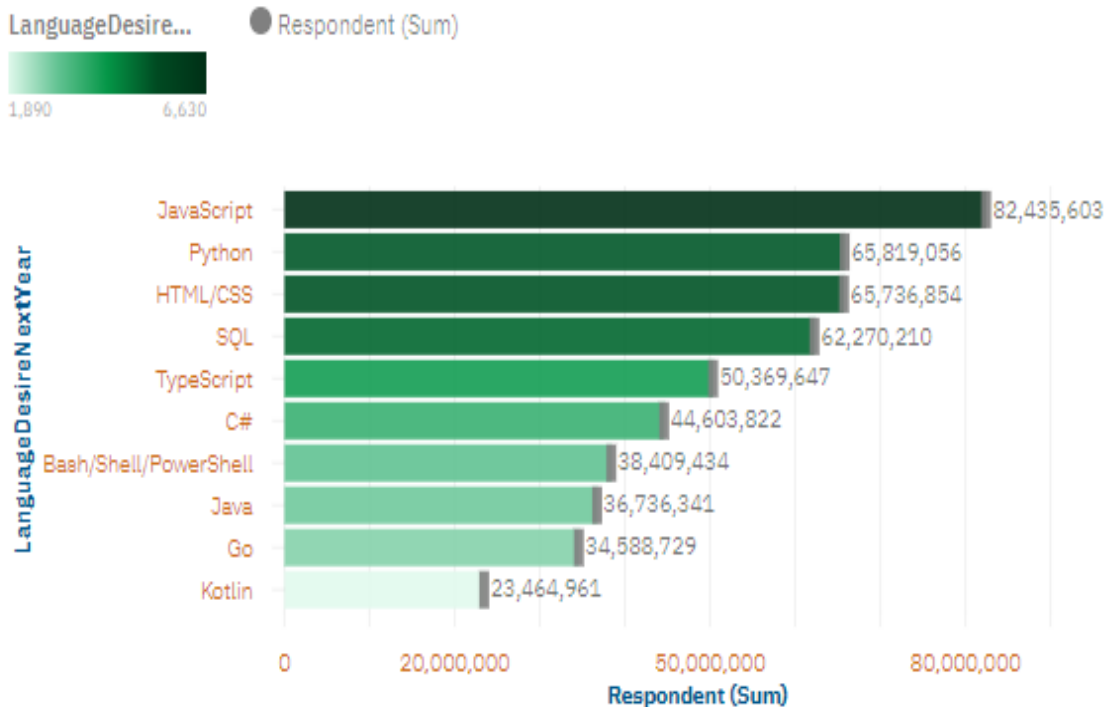
## Current Year

### Top 10 Language Worked



## Next Year

### Top 10 Language Desire For Next Year





# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

## Findings

- ▶ JavaScript is the top language worked in current season with 8687 number.
- ▶ HTML/CSS is the second top in current year.
- ▶ SQL is the 3<sup>rd</sup> position in language worked for current year.

## Implications

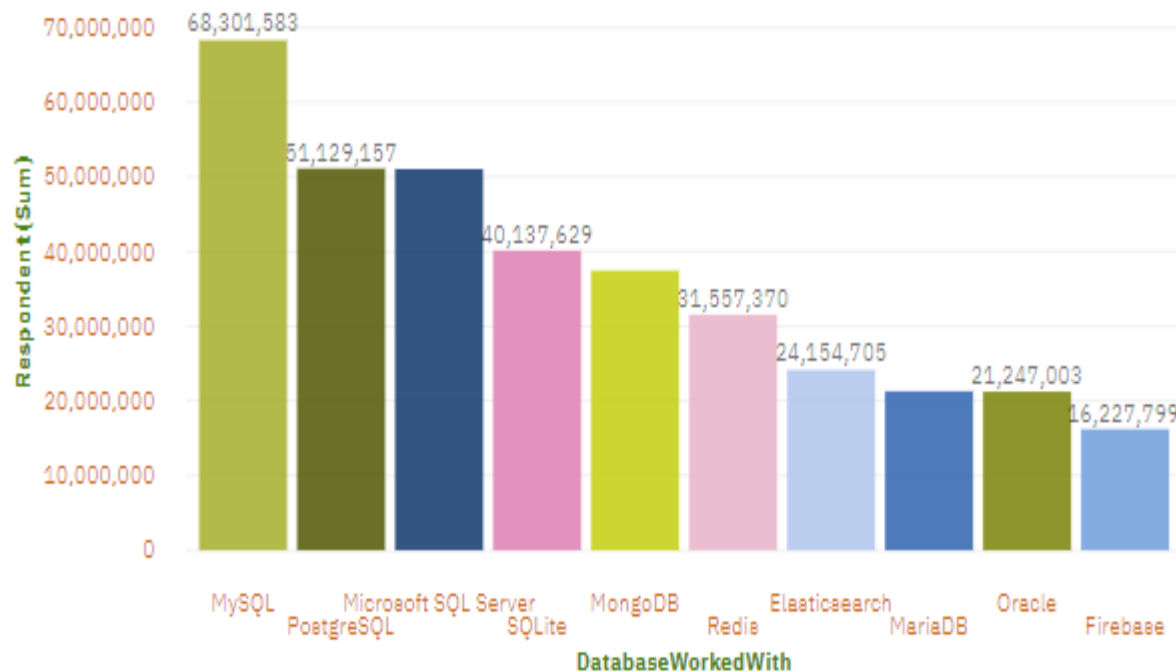
- ▶ JavaScript in demand for next year in language desire list.
- ▶ Python will 2<sup>nd</sup> position and new thread in language desire for future.
- ▶ HTML/CSS and SQL will be 3<sup>rd</sup> and 4<sup>th</sup> position in language desire list for next year.



# DATABASE TRENDS

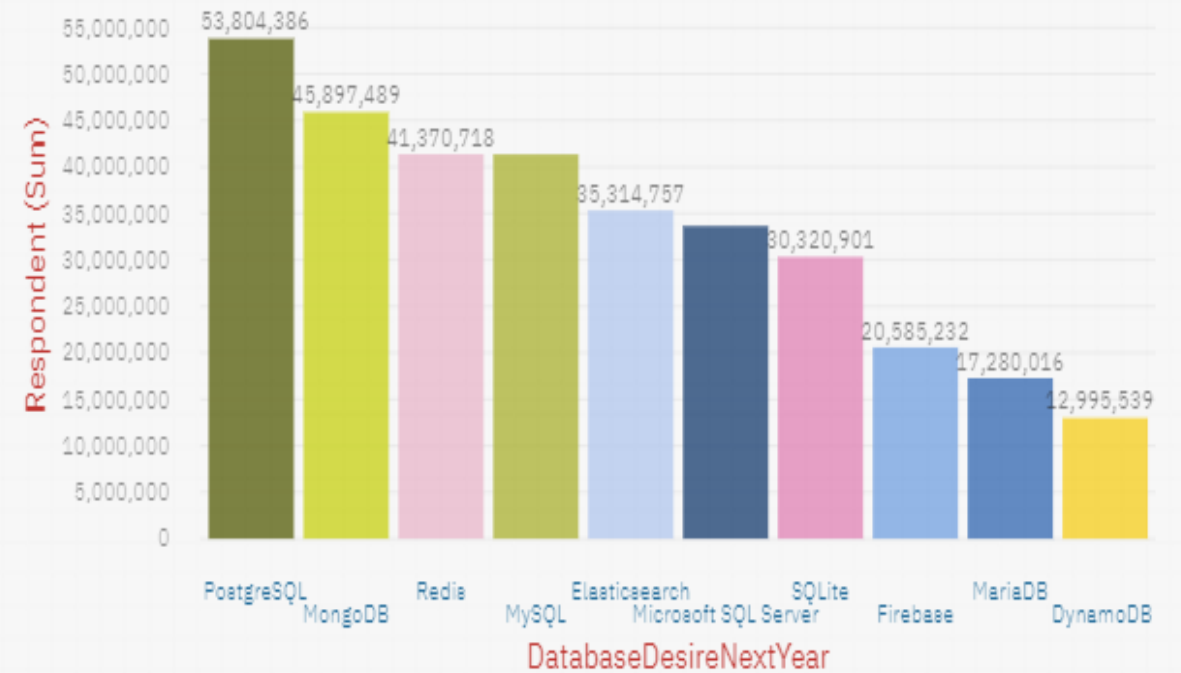
## Current Year

### Top 10 Database Worked



## Next Year

### Top 10 Database Desire For Next Year



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

## Findings

- ▶ MySQL is top in Database worked list.
- ▶ PostgreSQL and Microsoft SQL Server is in 2<sup>nd</sup> and 3<sup>rd</sup> position in database worked list in current year.
- ▶ SQLite is the 4<sup>th</sup> position in database with 40,137,629 numbers

## Implications

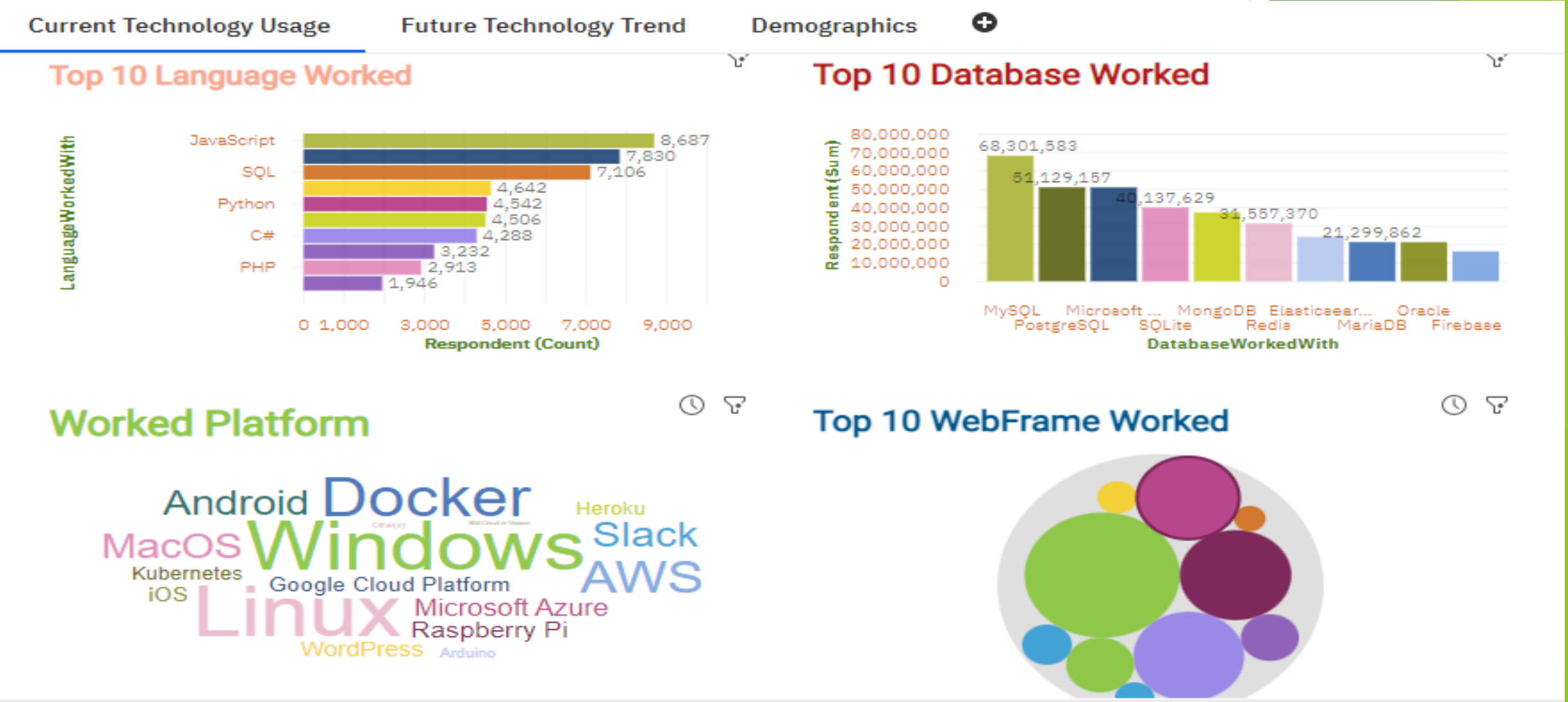
- ▶ PostgreSQL will be the top od database desire list.
- ▶ MongoDB will the 2<sup>nd</sup> highest in database desire list for next year.
- ▶ Redis and MySQL will be in 3<sup>rd</sup> and 4<sup>th</sup> in database desire list for next year.

# DASHBOARD

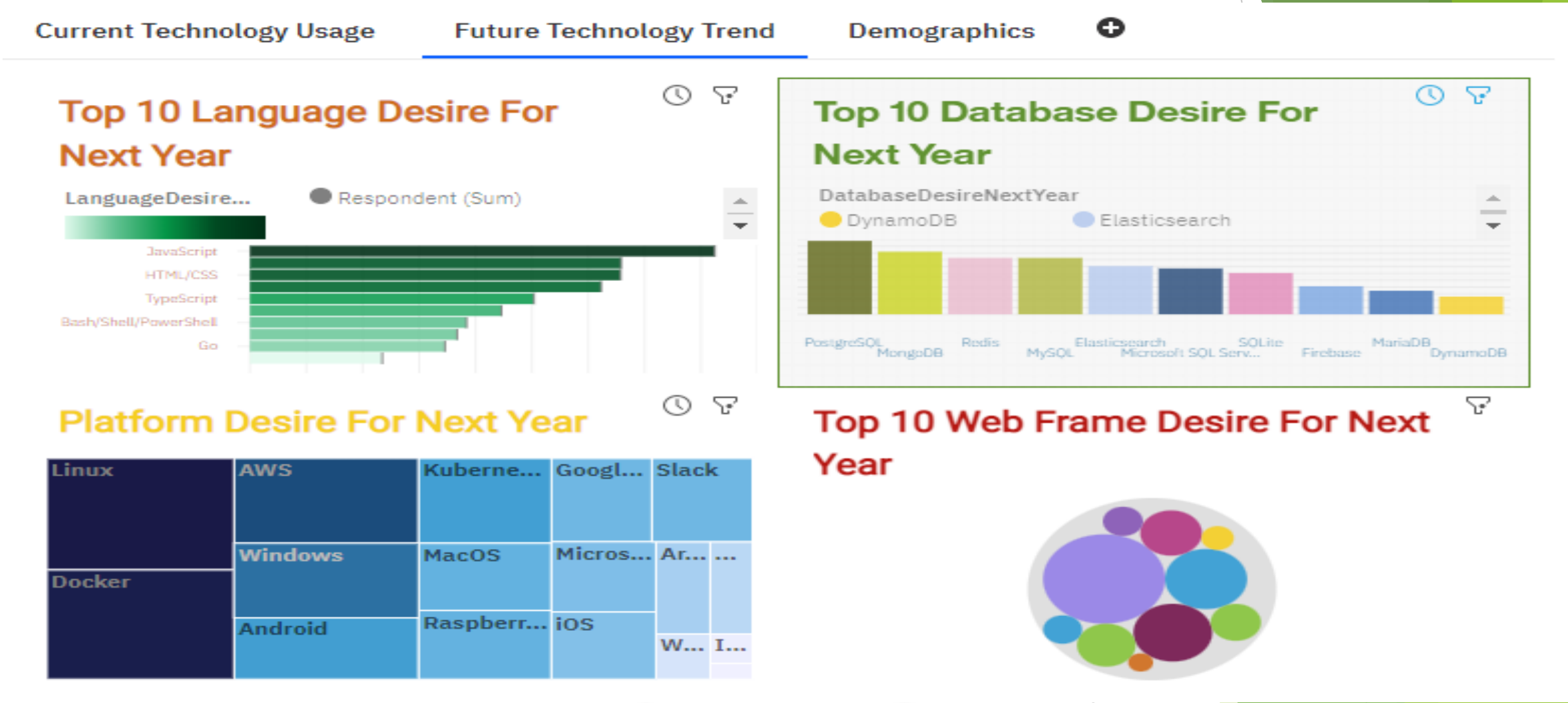


<https://datapatform.cloud.ibm.com/dashboards/947c46a3-d3da-4dd6-9ec3-9a32944e5f41/view/0569e00e63aa35e96fced0e407c82e032f3f2258bbbb815783d37b4959652497f36a4797c8794f0e88175166f6eb145a9b>

# DASHBOARD TAB 1



# DASHBOARD TAB 2



# DASHBOARD TAB 3

Current Technology Usage

Future Technology Trend

Demographics

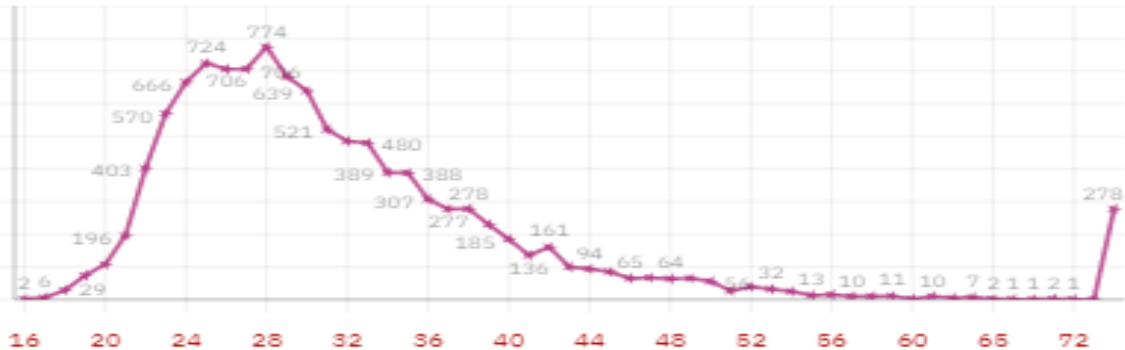


## Respondent classified by Gender

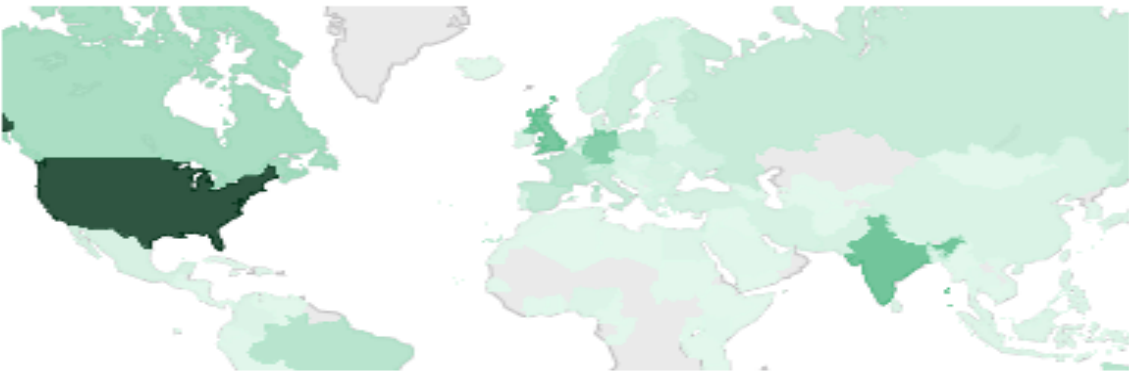
Gender  
● Woman ● Man



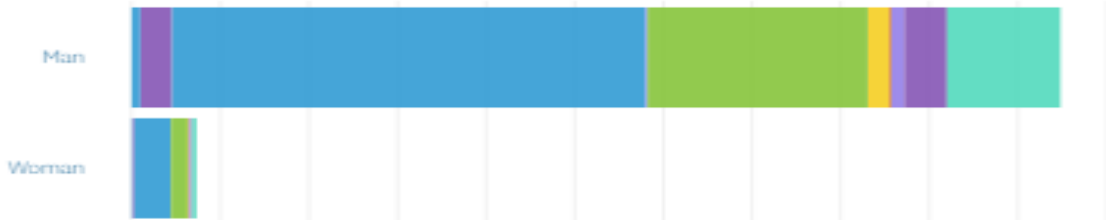
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## Respondent Count by Gender, classified by Formal Education Level.



# DISCUSSION



1. Top 10 Language is JavaScript, HTML/CSS, SQL, Bash/Shell/PowerShell, Python, Java, C, Typescript, PHP and C++ .
2. Top 10 Database is MySQL, PostgreSQL, Microsoft SQL Server, SQLite, MongoDB, Redis, Elastic search, Maria DB, Oracle and Firebase.
3. Windows is a good platform.
4. Top 10 Web frame is :- jQuery, Angular.js, React.js, ASP.NET, Express, Spring, Vue.js, Flask, Django and Laravel.
5. JavaScript, HTML/CSS and Python will top language desire for next year.
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# OVERALL FINDINGS & IMPLICATIONS

## Findings

1. Top 5 Language like : - JavaScript, HTML/CSS, SQL, Bash/Shell/PowerShell and Python in current year.
2. Top 4 Database like: - MySQL, PostgreSQL, Microsoft SQL Server and SQLite.
3. Windows is a good platform.
4. jQuery is the top web frame in current year.

## Implications

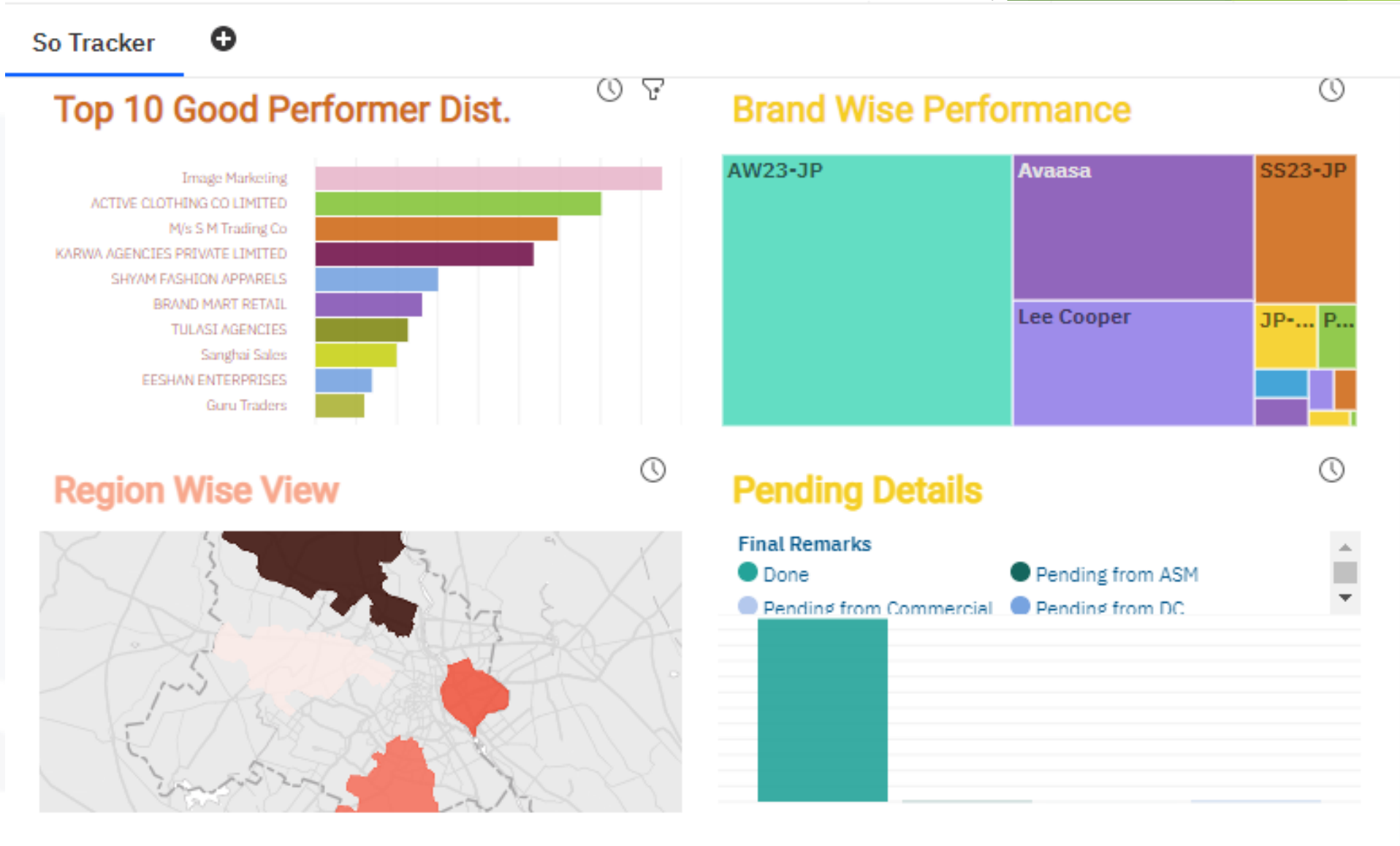
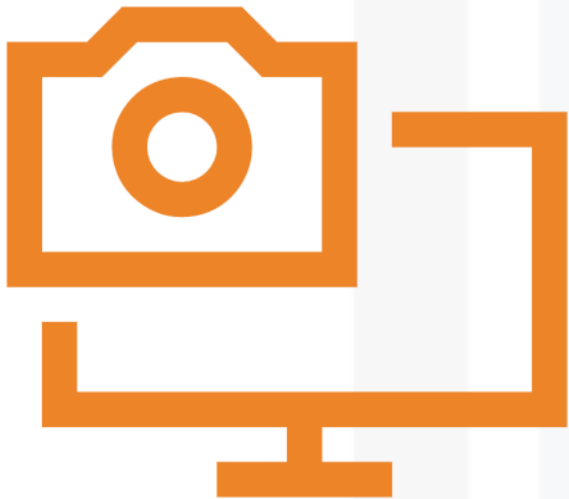
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# CONCLUSION



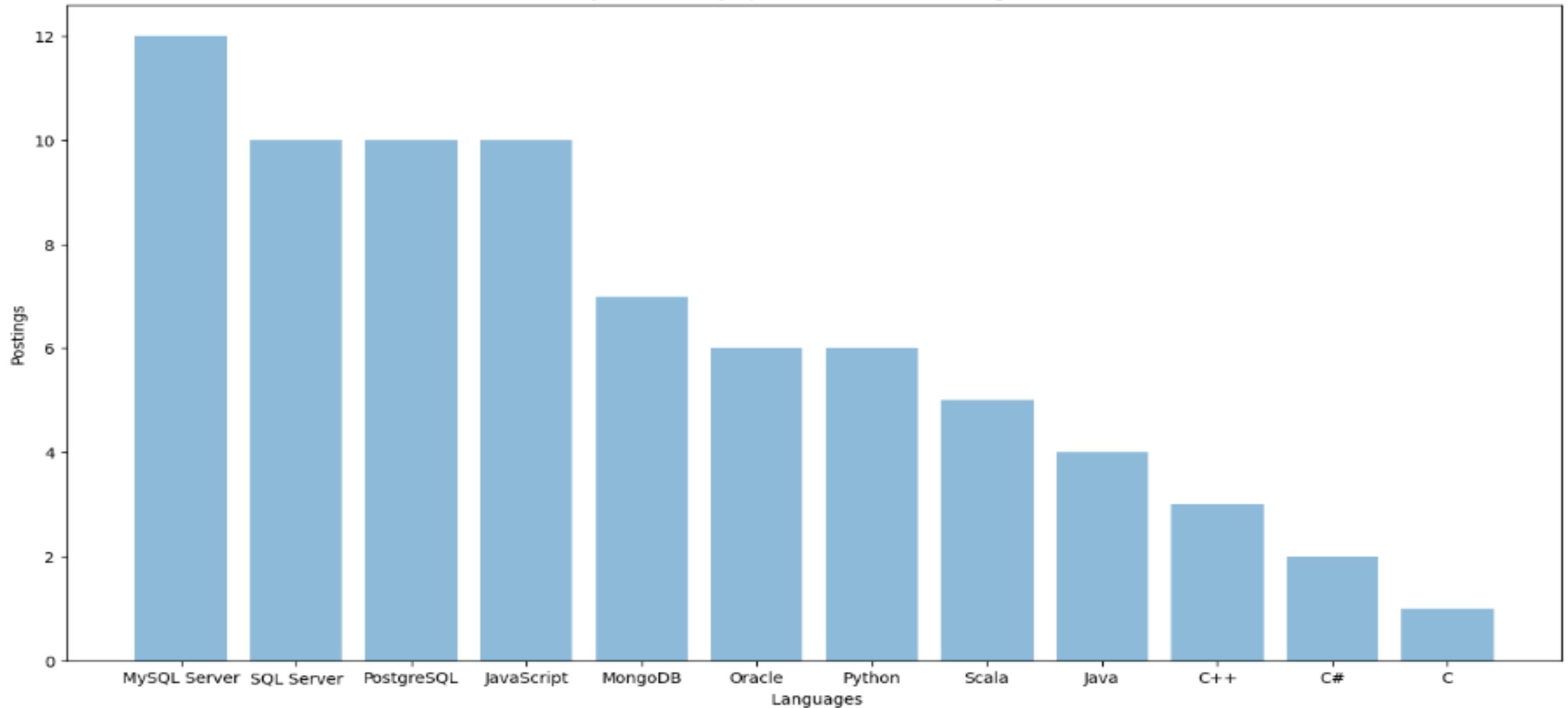
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# APPENDIX



# JOB POSTINGS

Jobs currently open for various technologies



# POPULAR LANGUAGES

