Current and Future for Information System

Muhammad Muslim Rifa'i

April 28, 2024

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OUTLINE

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

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EXECUTIVE SUMMARY

- Data analysis goals

- Methodology
  - Data gathering
  - Data analysis
  - Data Visualizations

- Result supported with graph

- Discussion of overall findings and implications regarding on the results.

- Conclusions

INTRODUCTION

- To be able to adapt to technological developments and market needs, we must know current and future technological trends.

- Research Questions:
  - What are the programing/database skills in the present?
  - What are the programing/database skills in the future?

METHODOLOGY

- Collect Data

- Data Wragling

- Data Exploration

- Data Cleaning
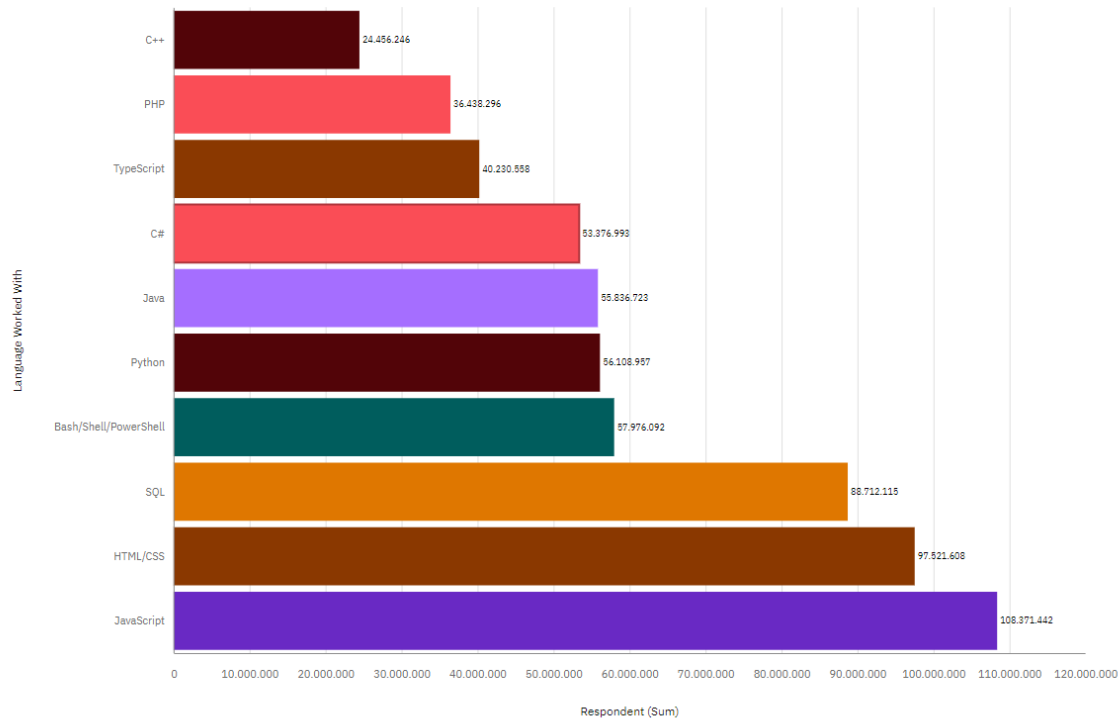
- Data Visualization
  - IBM Cognos

RESULTS

- Indonesia comprises over 1700 islands, divided into 37 provinces, presenting a unique geographical challenge for infrastructure development.

- The Ministry of Public Works and Housing (PUPR) oversees a staggering 41 million kilometers of roads

- Our objective is to evaluate the condition of these roads by categorizing them into "good" and "poor" conditions

- Assessment insights will direct funds for road repairs, prioritizing safety and infrastructure efficiency in the coming year.

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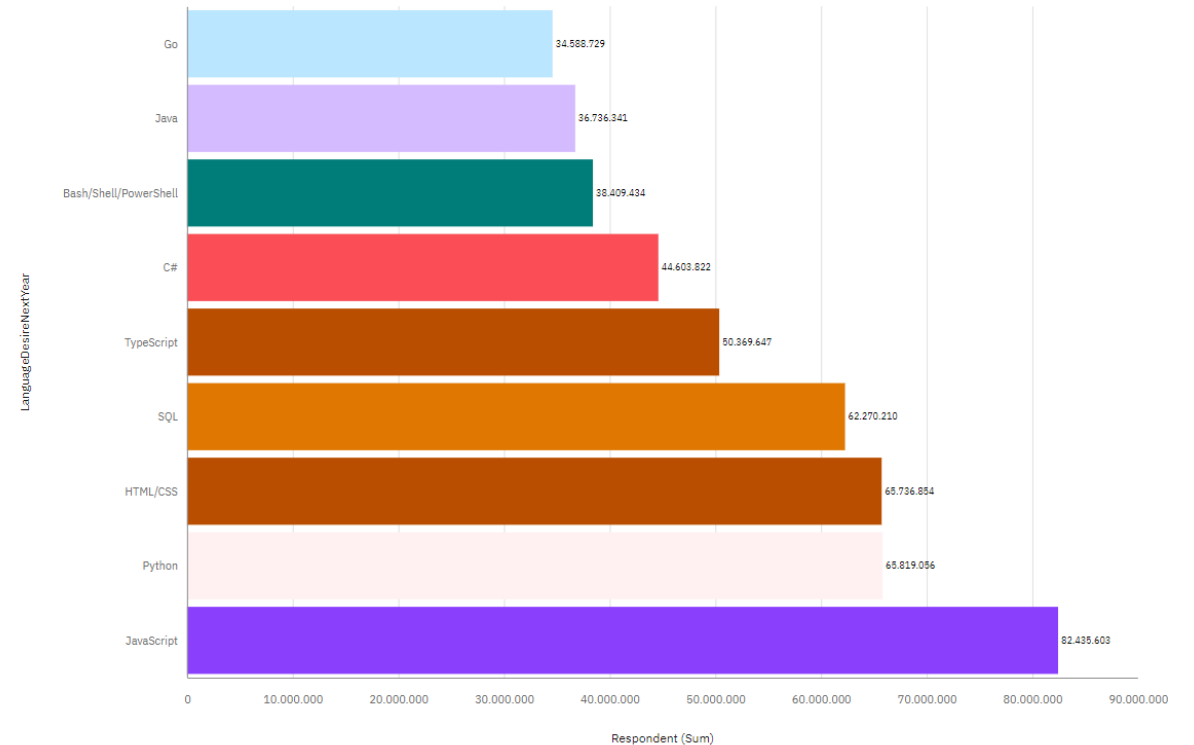
PROGRAMMING LANGUAGE TRENDS

Current Year

Next Year

Top 10 Language Worked With

Language Worked With	Respondent (Sum)
C++	24.456.246
PHP	36.438.296
TypeScript	40.230.558
C#	53.376.993
Java	55.836.723
Python	56.108.957
Bash/Shell/PowerShell	57.976.092
SQL	88.712.115
HTML/CSS	97.521.608
JavaScript	108.371.442

Top 10 Language Worked With Next Year

LanguageDesireNextYear	Respondent (Sum)
Go	34.588.729
Java	36.736.341
Bash/Shell/PowerShell	38.409.434
C#	44.603.822
TypeScript	50.369.647
SQL	62.270.210
HTML/CSS	65.736.854
Python	65.819.056
JavaScript	82.435.603

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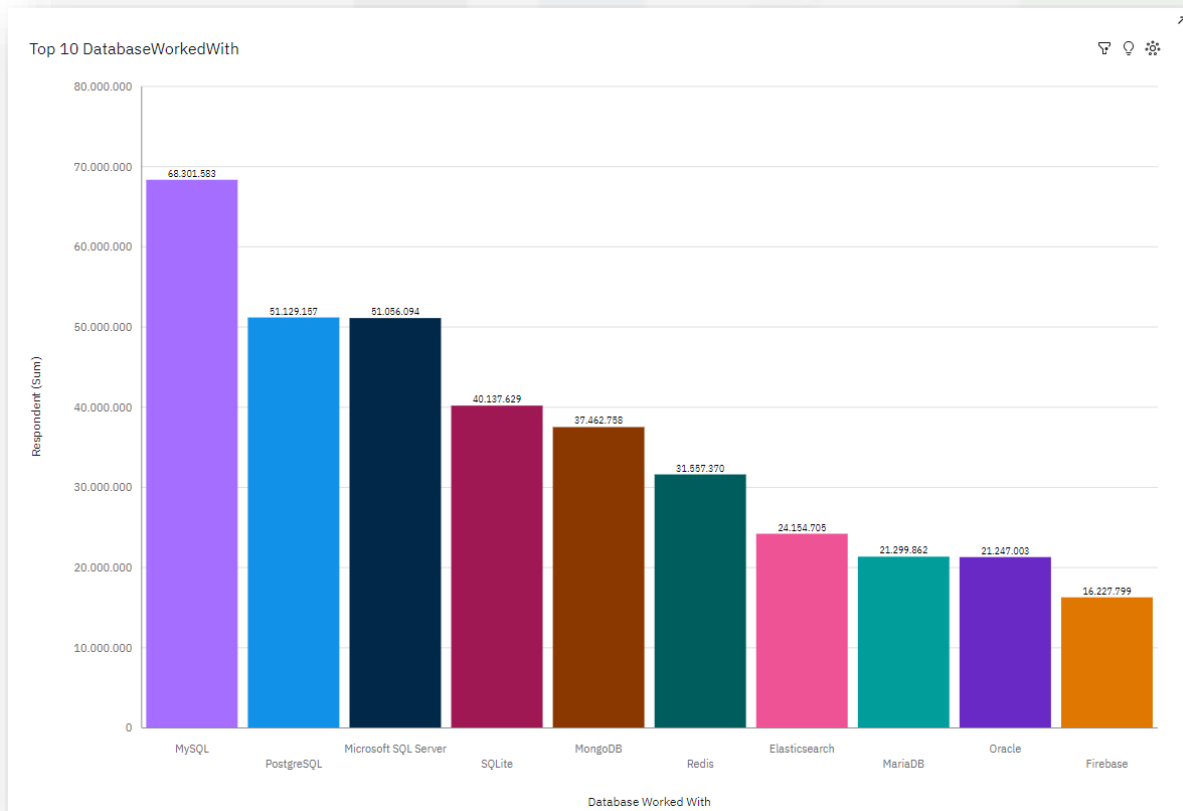# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- **Javascript, SQL** and **HTML/CSS** is most highest number of respondent working with for current and next year

- **Python** is getting high interest for next year

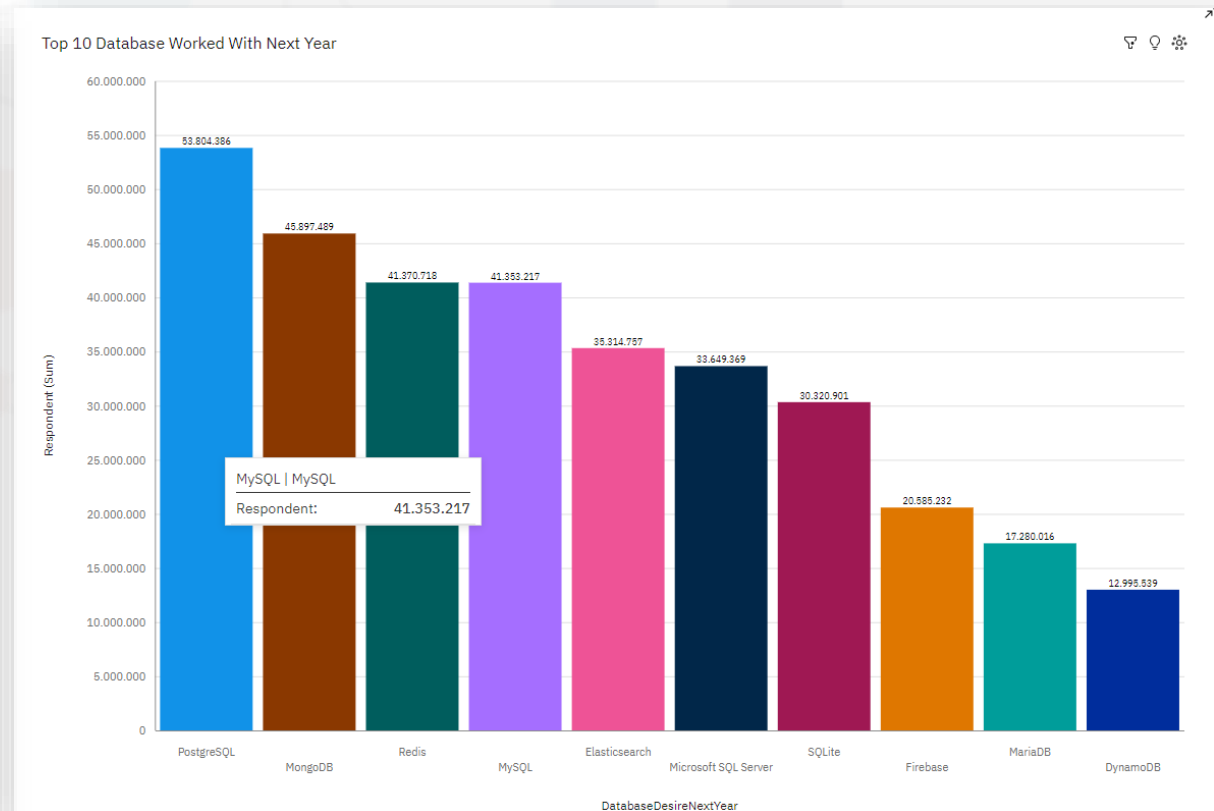- **Powershell** popularity fall down for next year.

Implications

- **Web based application** is still have best place for current and next year

- **Python** is best language to learn for Next year

- For database language, **SQL** still have good place for next year

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DATABASE TRENDS

Current Year

Top 10 DatabaseWorkedWith

Database	Respondent (Sum)
MySQL	68.301.583
PostgreSQL	51.129.157
Microsoft SQL Server	51.056.094
SQLite	40.137.629
MongoDB	37.462.788
Redis	31.557.370
Elasticsearch	24.154.705
MariaDB	21.299.862
Oracle	21.247.003
Firebase	16.227.799

Next Year

Top 10 Database Worked With Next Year

Database	Respondent (Sum)
PostgreSQL	53.804.386
MongoDB	45.897.489
Redis	41.370.718
MySQL	41.353.217
Elasticsearch	35.314.757
Microsoft SQL Server	33.649.369
SQLite	30.320.901
Firebase	20.585.232
MariaDB	17.280.016
DynamoDB	12.995.539

MySQL | MySQL
Respondent: 41.353.217

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DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- **MySQL** is most used DBMS for current year but going down to 4th place for next year

- **PostgreSQL** is number 3rd for current Year and will be most popular for next year

- **MongoDB** have good popularity for next year as NoSQL Database
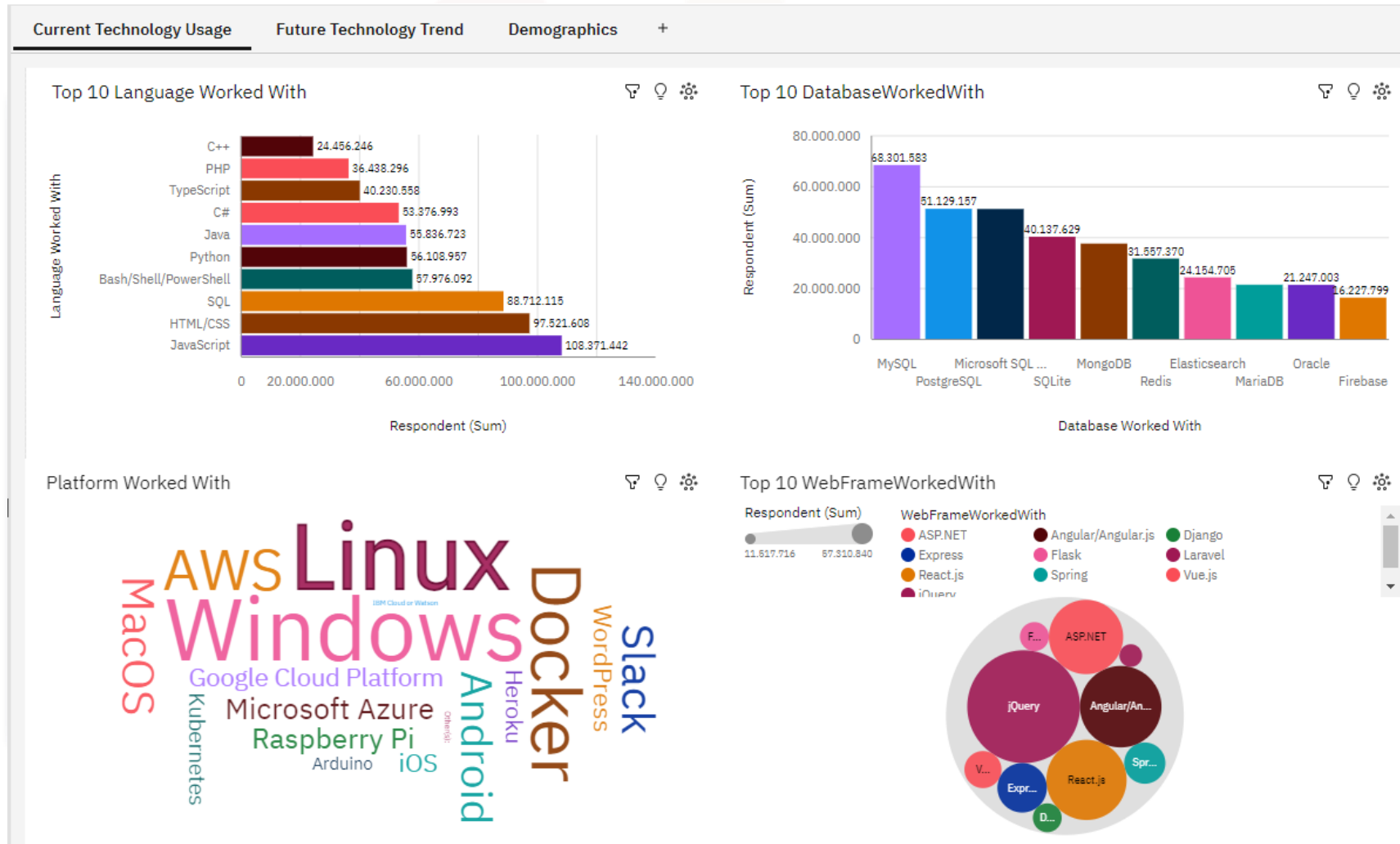
Implications

- RDBMS and SQL base databases like **PostgreSQL, MySQL** and **Microsoft SQL Server** still have good place for next Year

- **MongoDB** growing between SQL base databases and most interesting to learn for next year

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DASHBOARD

https://github.com/Rifai19/IBM-Data-Analyst-Capstone-Project--Week-5/blob/main/Task%206%20-%20IBM%20Data%20Analyst%20Capstone%20Project%20Week%205.pdf
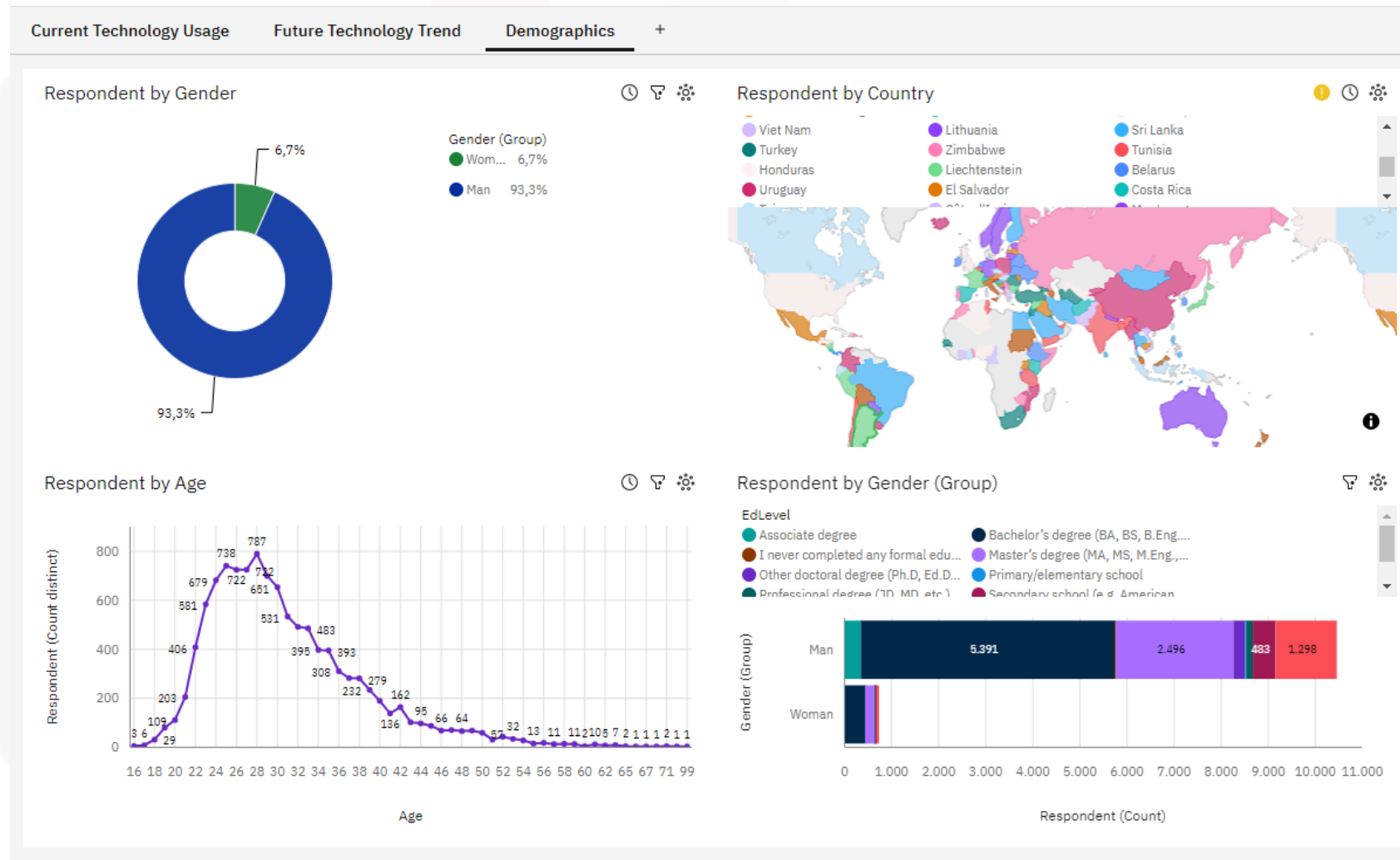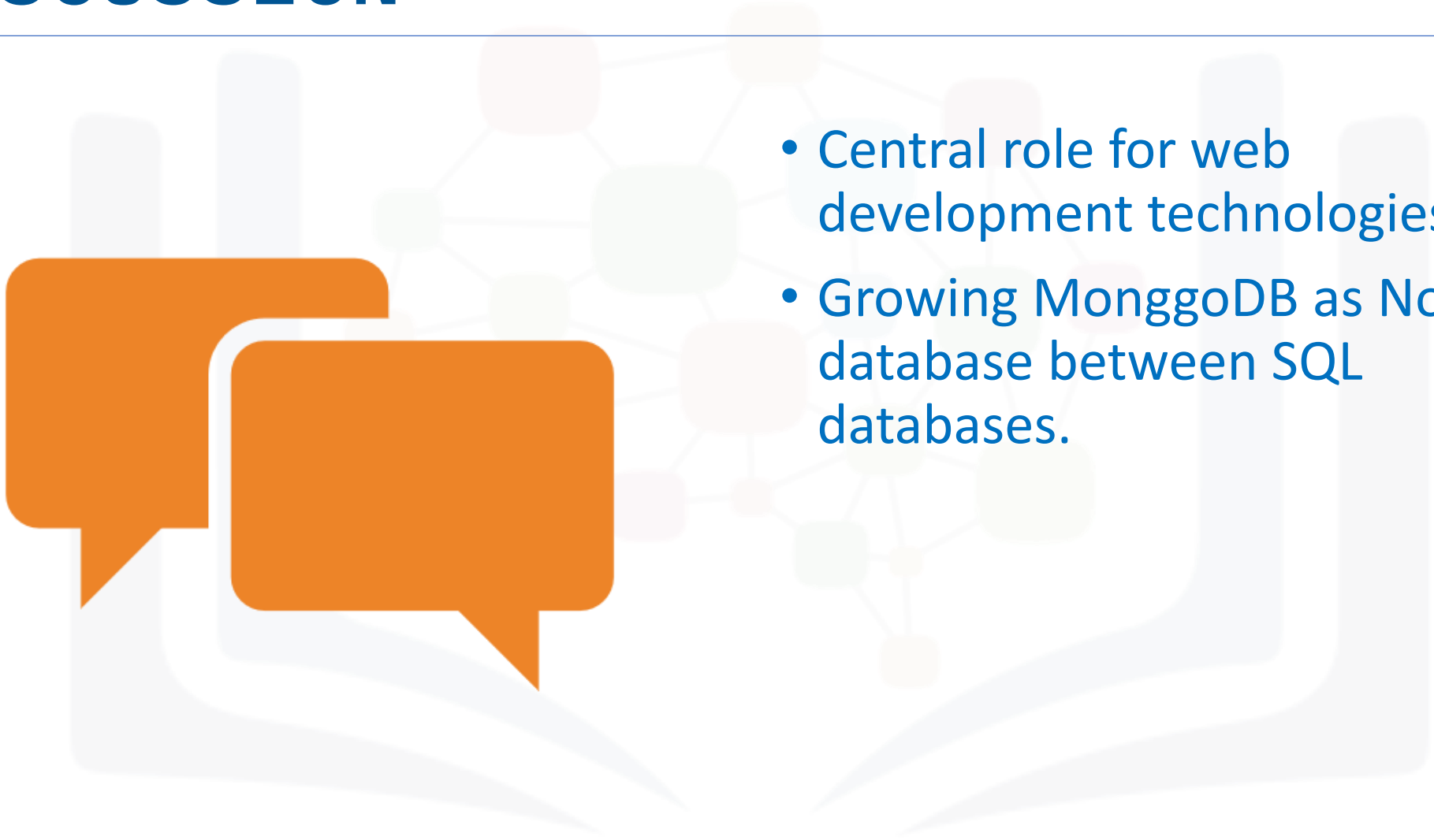
DASHBOARD TAB 1

DASHBOARD TAB 2
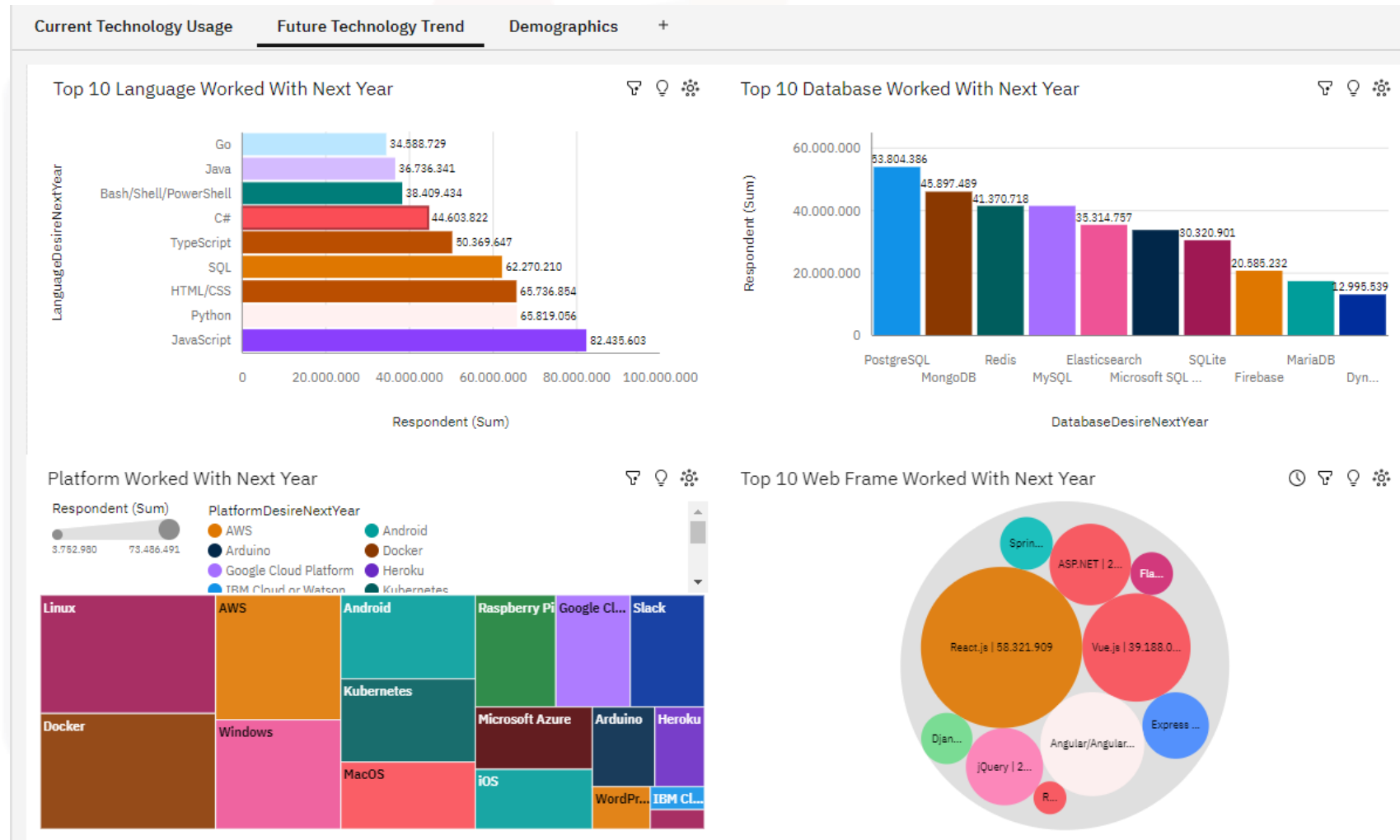
DASHBOARD TAB 3

DISCUSSION

- Central role for web development technologies.

- Growing MonggoDB as NonSQL database between SQL databases.

OVERALL FINDINGS & IMPLICATIONS

Findings

- Next year, **JavaScript and HTML/CSS** are expected to maintain their positions as the top two languages.

- **Bash/Shell/PowerShell** are not anticipated to be prominently featured.

- **PostgreSQL** is projected to rise to the top spot over **MySQL**, while Microsoft SQL Server and SQLite might become less prevalent.

- **MongoDB** have good popularity for next year as NoSQL Database

Implications

- **JavaScript and HTML/CSS** will be continue popular

- **Python** is going to be more interested

- SQL servers will be required but the most popular database is expected to be **PostgreSQL** and **MongoDB**

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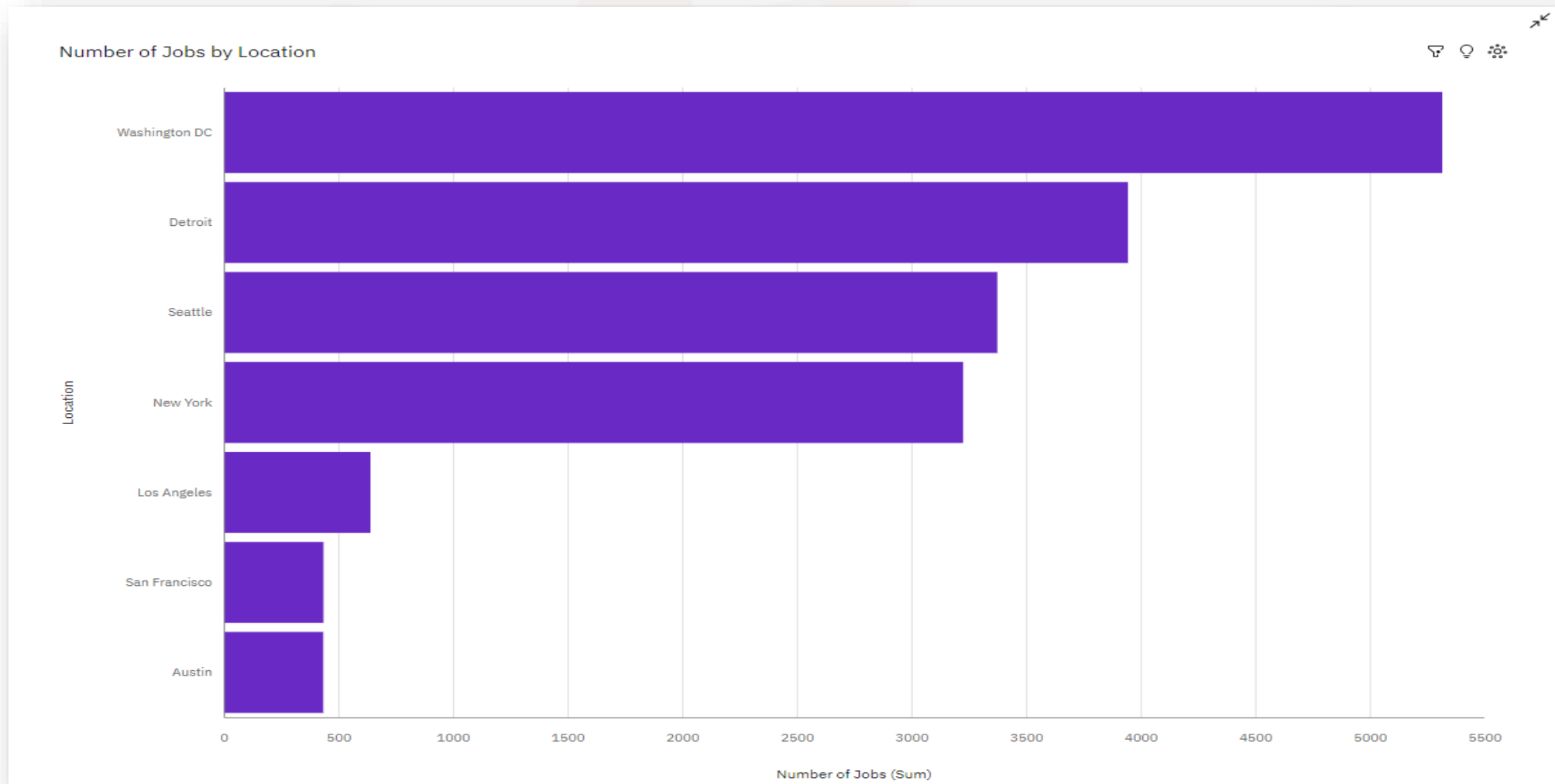
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CONCLUSION

- HTML/CSS is estimated to stay popular the same in the next year

- PostgreSQL will be the most demand of database and MongoDB for 2nd place

APPENDIX

- Number of Jobs by Location
- Average salary for Each Programming Language

JOB POSTINGS

POPULAR LANGUAGES

Average Annual Salary by Language