SURVEYING TRENDS IN TECHNOLOGY PREFERENCE AMONGST DEVELOPERS

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IBM Developer

SKILLS NETWORK

OUTLINE

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

EXECUTIVE SUMMARY

- **Current Technology Usage**
  - Top ten languages.
  - Top ten Databases.
  - Platforms
  - Top ten Webframes.
- **Future Technology Usage**
  - Top ten languages desired for the coming year.
  - Top ten Databases desired for the coming year.
  - Platforms desired for the coming year.
  - Top ten Webframes desired for the coming year.
- **Demographics**
  - Respondents classified by Gender.
  - Respondent count for Countries.
  - Respondent Count by Age.
  - Respondent Count by Gender, classified by Formal Education Level.

INTRODUCTION

- This Presentation is made to be shared with global investors, employers and developers within the technology market and beyond.
- Here we have identified past and future trends in preference and requirements as it concerns Programming Languages, Dataframes, Webframes and Platforms.
- The implications of these findings will be included in this presentation.

METHODOLOGY

- Data used for this analysis was sourced from a subset of “Stack Overflow Developer Survey Results”.
- The data was then used to visualize, within the IBM COGNOS Dashboard environment, the relationship between key features of the dataset.

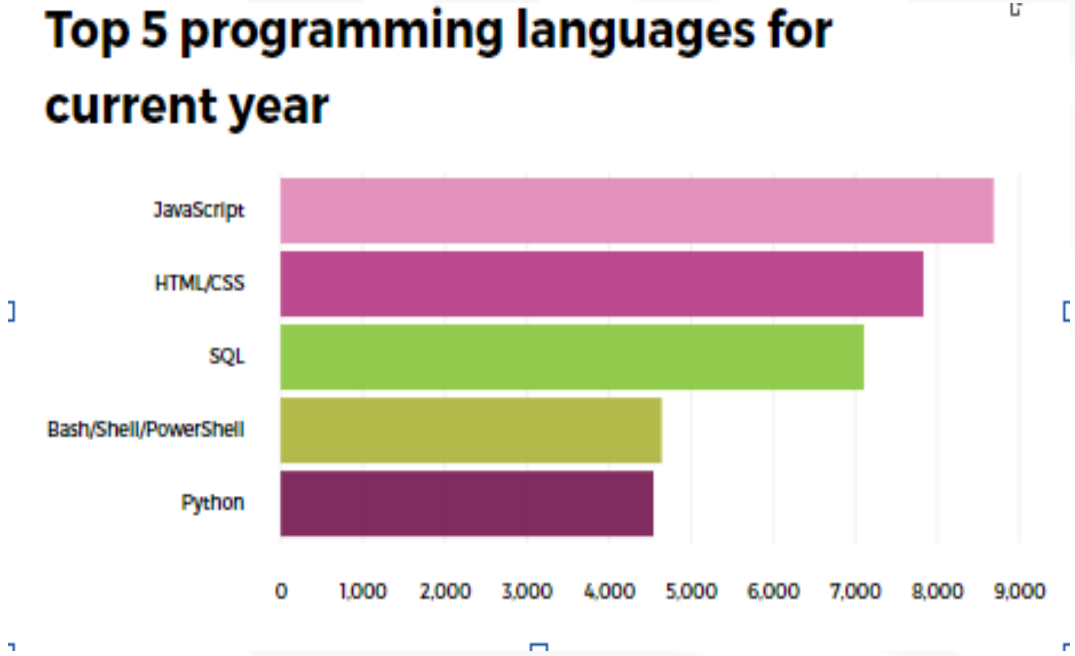
RESULTS

Results are based on this dataset:

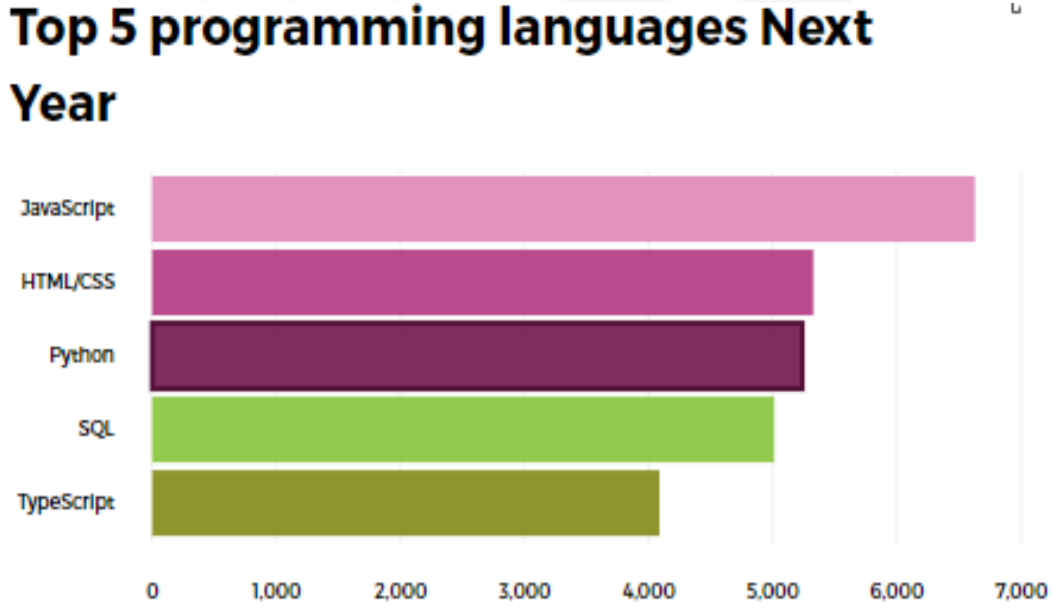
	Respondent	LanguageWorkedWith	LanguageDesireNextYear	DatabaseWorkedWith	DatabaseDesireNextYear	PlatformWorkedWith
0	4	C	C	MySQL	MySQL	Linux
1	4	C++	C#	SQLite	SQLite	Windows
2	4	C#	JavaScript	NaN	NaN	NaN
3	4	Python	SQL	NaN	NaN	NaN
4	4	SQL	NaN	NaN	NaN	NaN
...	...	...	...	...	...	...
74584	25142	Go	Python	NaN	NaN	NaN
74585	25142	HTML/CSS	R	NaN	NaN	NaN
74586	25142	PHP	NaN	NaN	NaN	NaN
74587	25142	Python	NaN	NaN	NaN	NaN
74588	25142	R	NaN	NaN	NaN	NaN

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

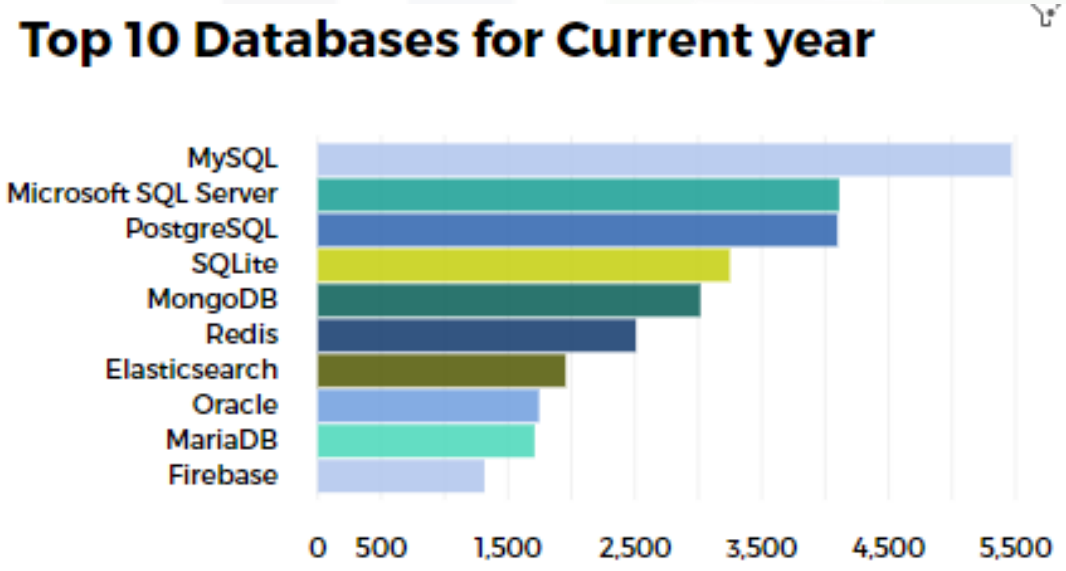
- Keeping with the trend from this year, JavaScript and HTML/CSS remain the most desirable programming languages.
- For next year, there is a projected increase in interest for Python and an introduction of TypeScript into the top 5.
- Interest in Bash/Shell/PowerShell is projected to drop for the coming year.

Implications

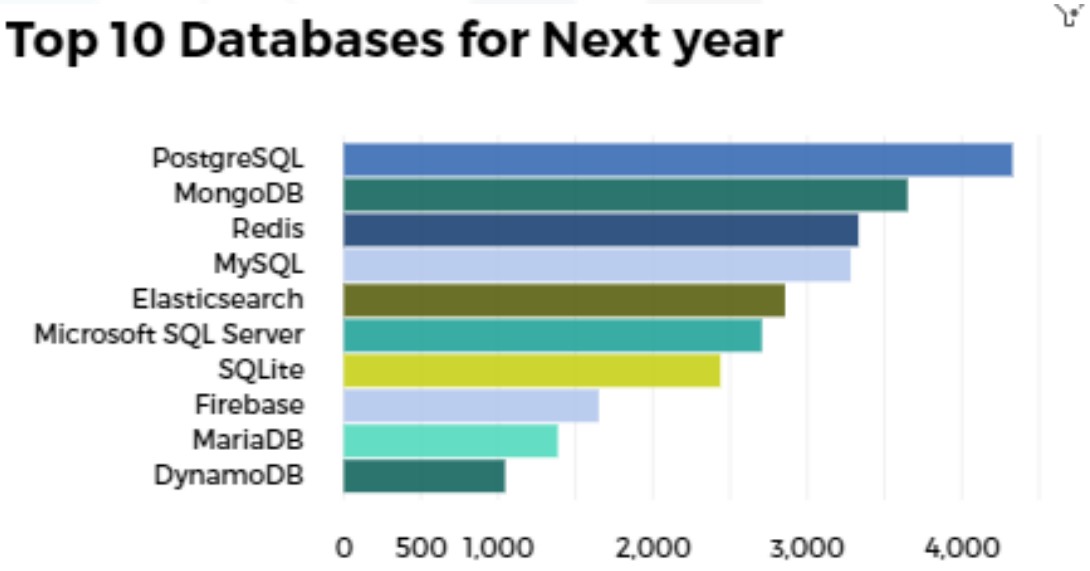
- Interest in and preference for python by programmers will have a positive impact in the growing demand for Artificial Intelligence and Machine Learning.
- SQL seems to remain the choice of programmers when it comes to Big Data Technology.
- With JavaScript and HTML/CSS topping the preference list, just implies that Web Development is still very much in high demand.

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- PostgreSQL , MongoDB and Redis have increased desirability for next year.
- MySQL and Microsoft SQL server have reduced desirability for next year.

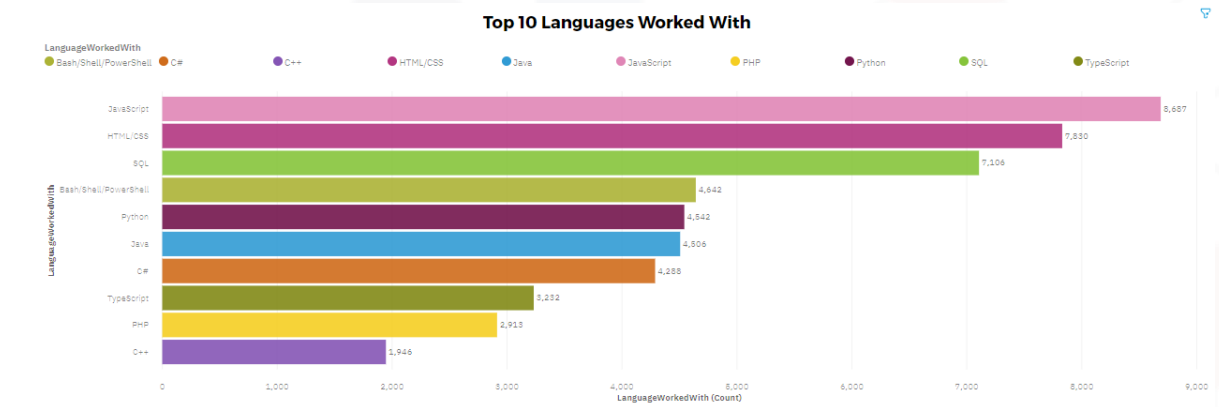
Implications

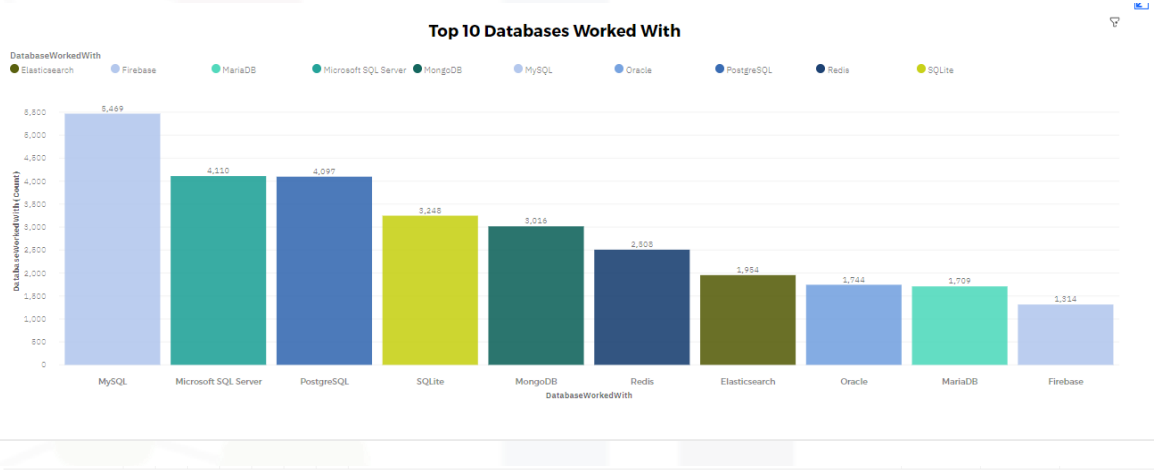
- NoSQL databases will make huge impact in the coming year.
- Data trends point towards the preference of Open-source databases.

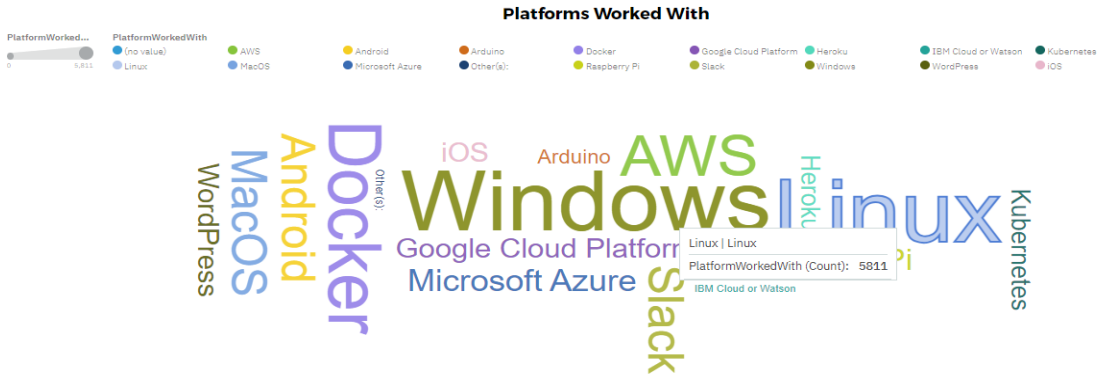
DASHBOARD

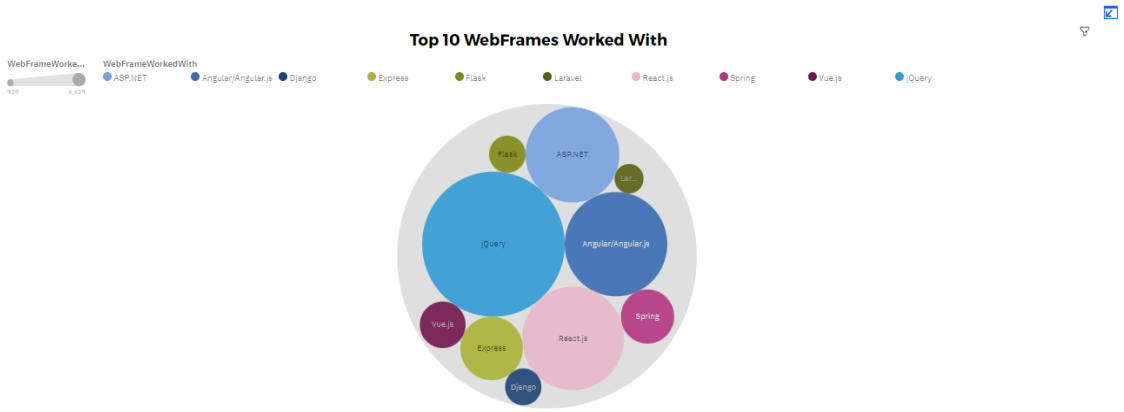
https://dataplatform.cloud.ibm.com/dashboards/2e04f4d4-4d57-4396-a801-0060ff8f7a70/view/5305f9033fb522f169f1eae4079d2b072c37205ebbbb8a56828d7b4959652797a96012c4c82b49598c105767a5be11509a

CURRENT TECHNOLOGY USAGE DASHBOARD









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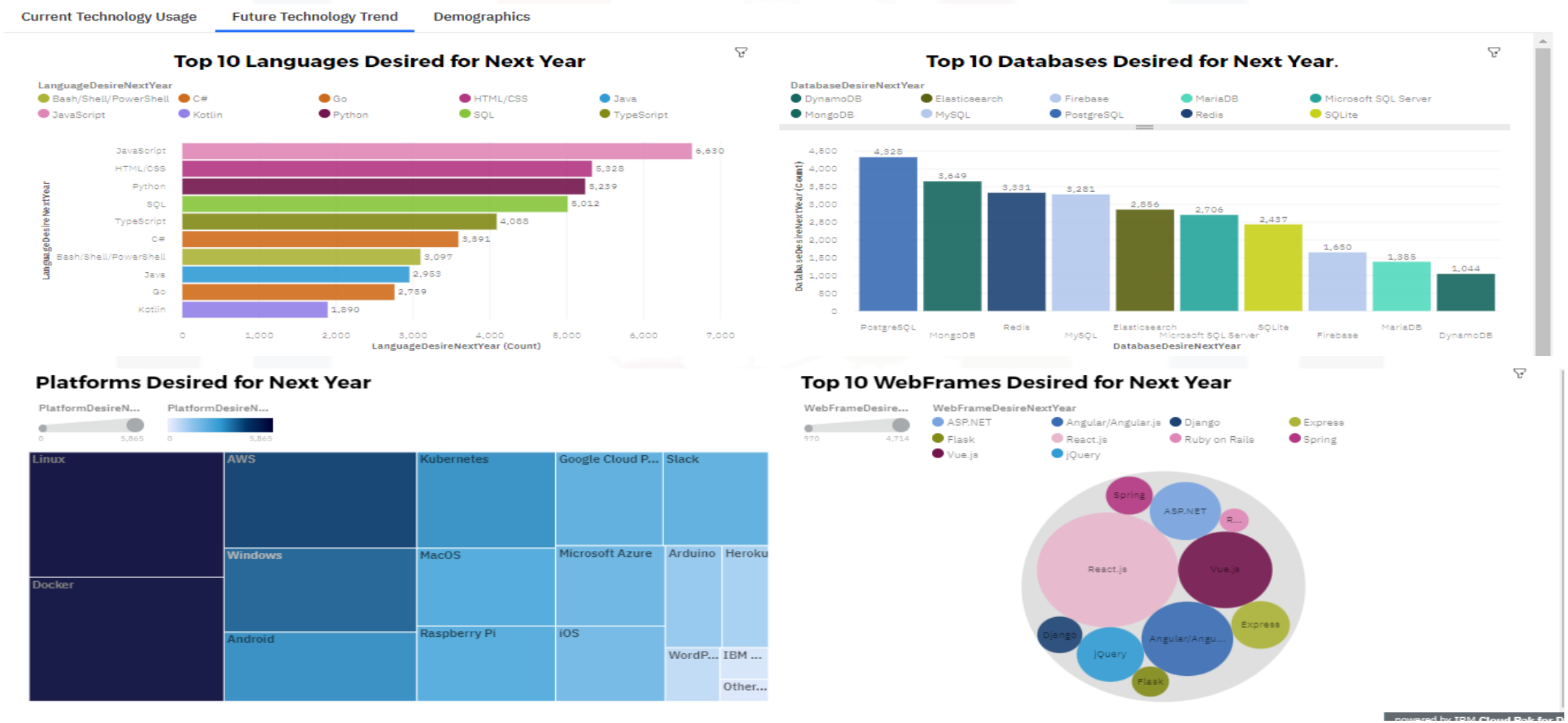
FUTURE TECHNOLOGY TREND DASHBOARD



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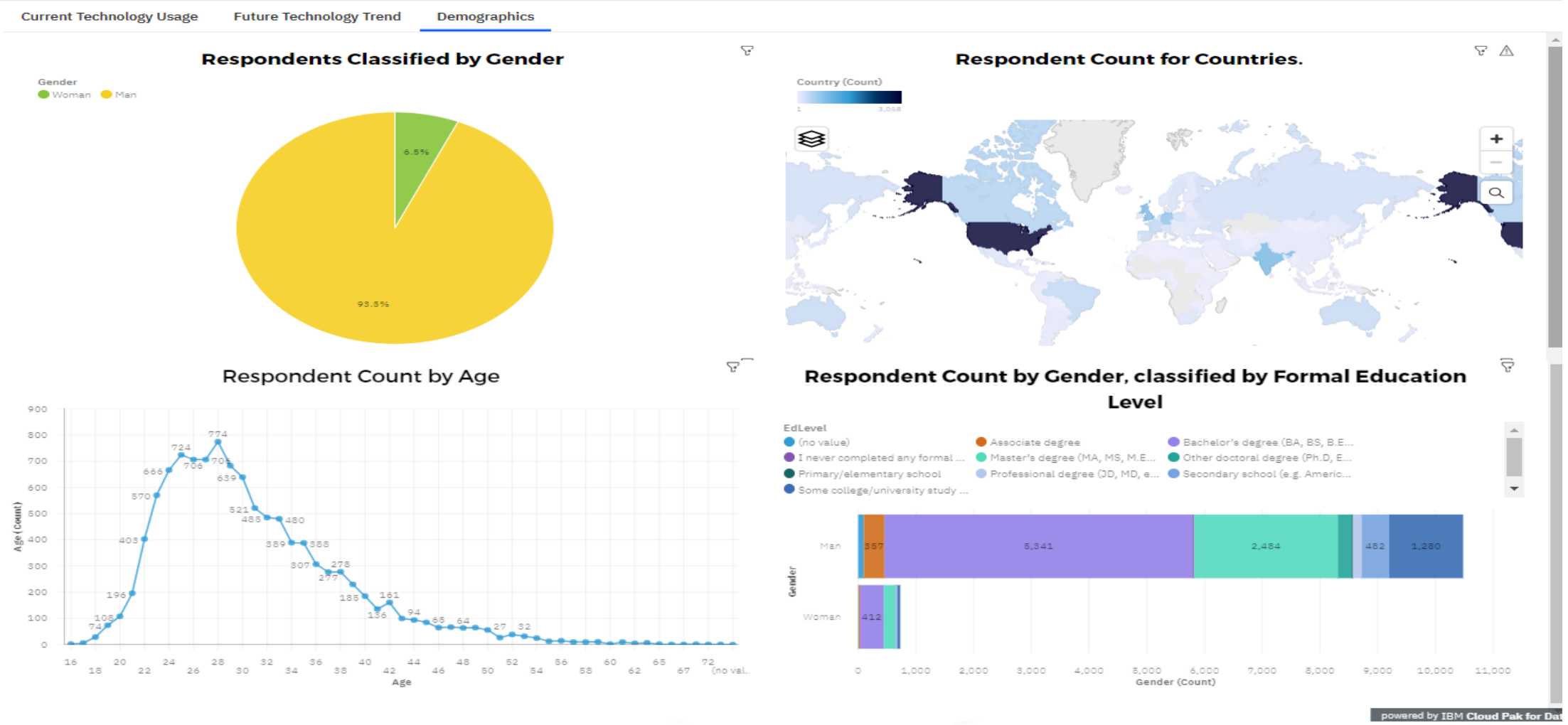
DEMOGRAPHICS DASHBOARD



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DISCUSSION

- Technology Trends pointing towards a future leaning heavily towards Big Data and machine learning.
- Bridging the gap in technology in Developing Countries and between Genders.
- Future Training and reskilling of programmers to fit current and future demands

OVERALL FINDINGS & IMPLICATIONS

Findings

- The current and future is trending in favor of high-level languages such as JavaScript, HTML and Python.
- Non-relational databases are on the rise as far preference by programmers is concerned.
- There is huge gap between Genders in the tech industry
- Third world countries are grossly under-represented in the tech industry.

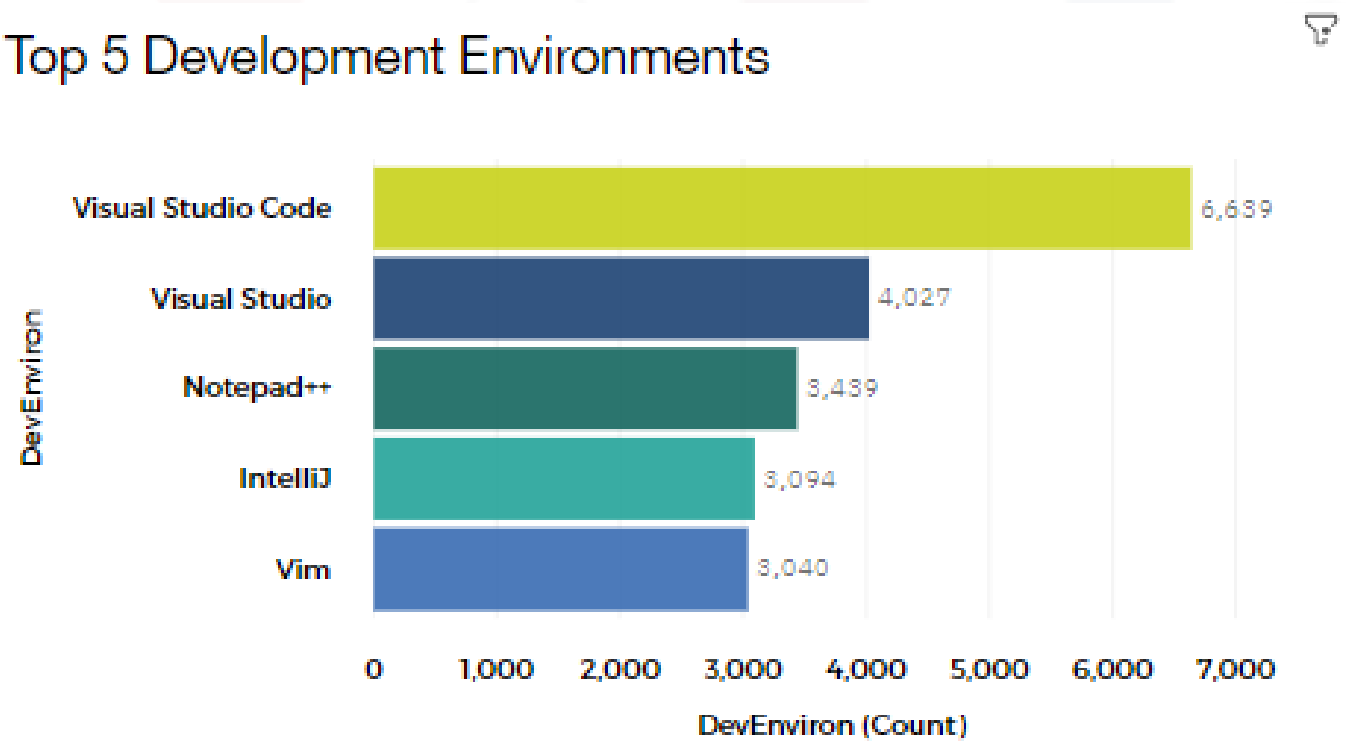
Implications

- Easy to learn, advanced languages are the most in-demand.
- The rising preference for non-relational databases pointing towards continuous rise in Big Data, Machine Learning and Artificial Intelligence.
- Technology must be spread to Regions and Genders that are underrepresented.

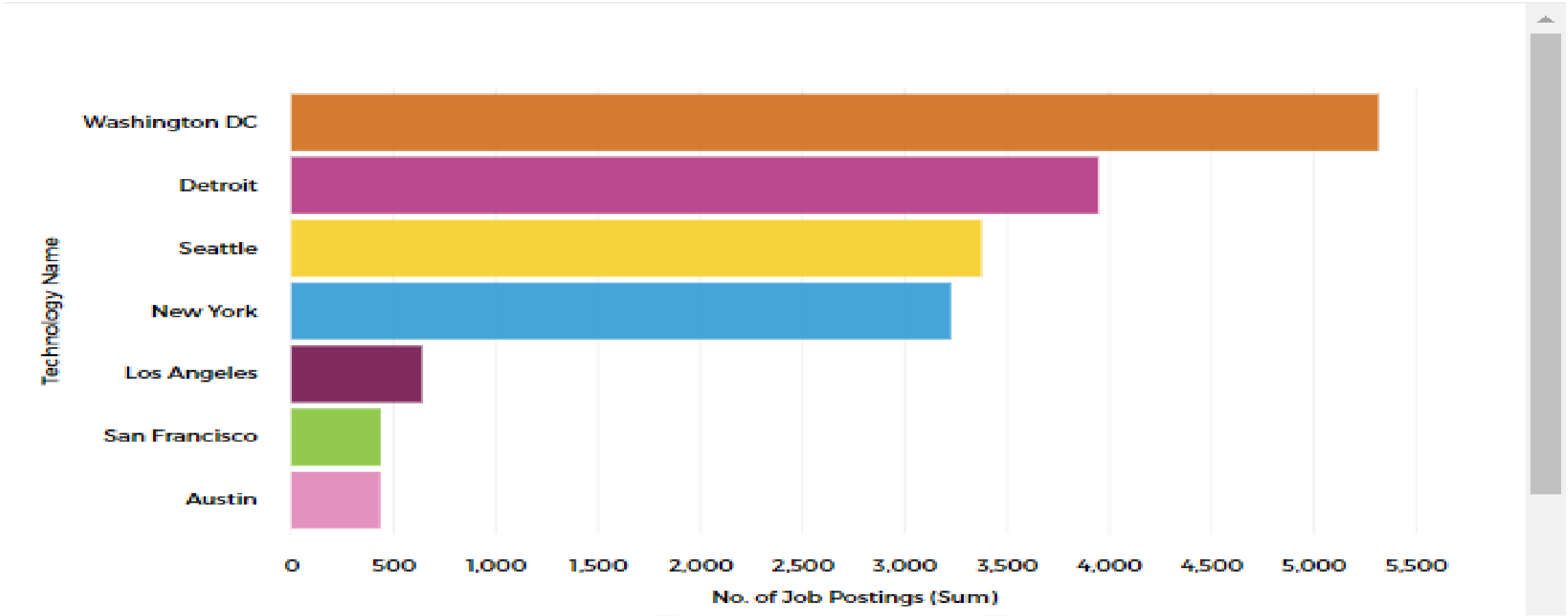
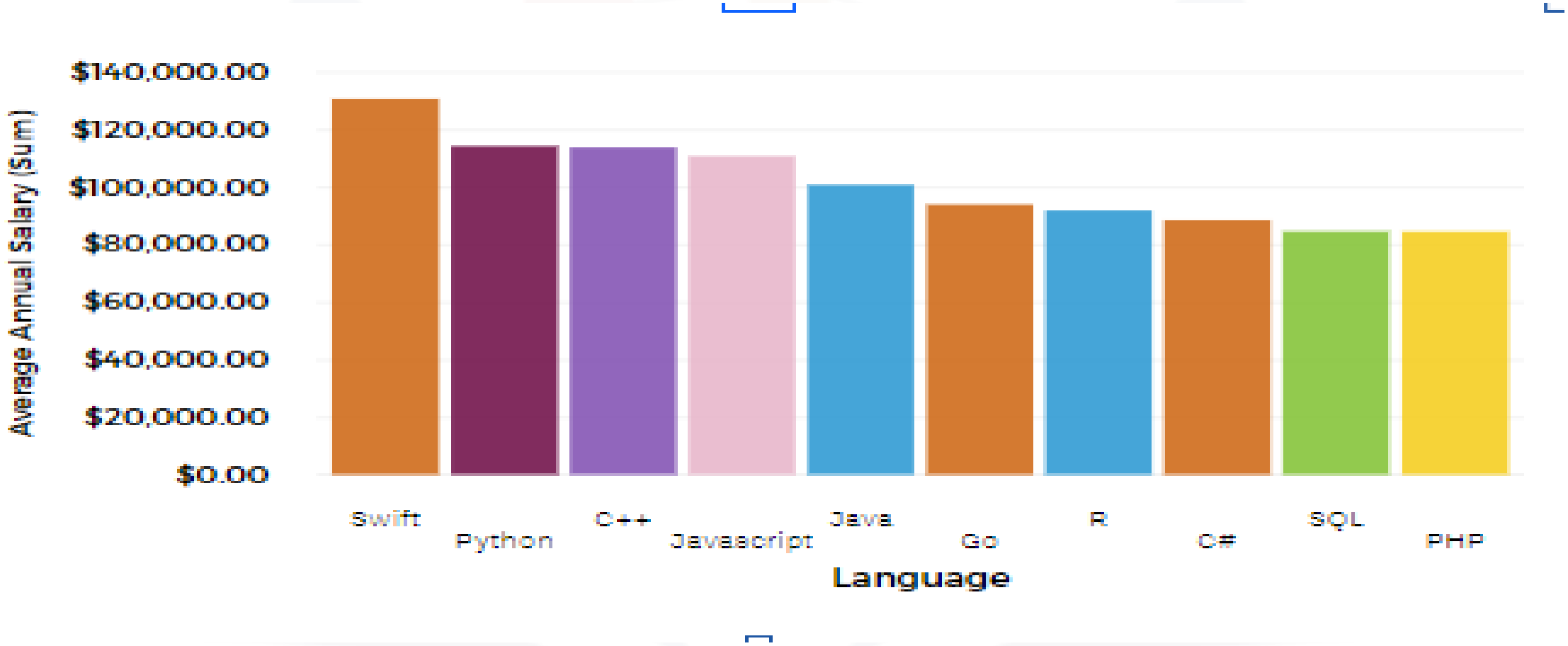
CONCLUSION

- Technology Trends for current and next year
- Programming Languages, Database and Platform overview
- Demographics overview
- Actions to be taken

APPENDIX


Top 5 Development Environments
DevEnviron
Visual Studio Code
Visual Studio
Notepad++
IntelliJ
Vim
6,639
4,027
3,439
3,094
3,040
0
1,000
2,000
3,000
4,000
5,000
6,000
7,000
DevEnviron (Count)

JOB POSTINGS



POPULAR LANGUAGES