Capstone Project

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OUTLINE

- Executive Summary
- Introduction
- Methodology
- Results
  - Charts
  - Dashboard
- Findings
- Conclusion

EXECUTIVE SUMMARY

Data related to job postings and training portals was analyzed to identify technology trends:

- Top technologies remain largely the same, with changes appearing in the ranking of the top technologies
- Training programs and mix of resources should be evaluated, but adjustments will likely be small
- Survey responses were heavily skewed by gender and warrant further review for accuracy
- Further analysis of resource demand may be useful

INTRODUCTION

To remain competitive, we need to keep pace with changing technologies. This is done by regularly analyzing data related to job postings and training portals to identify trends involving:

- Popular Programming Languages
- Popular Database Platforms

As well as general information regarding:

- Demographics
- Job Locations
- Salary Information

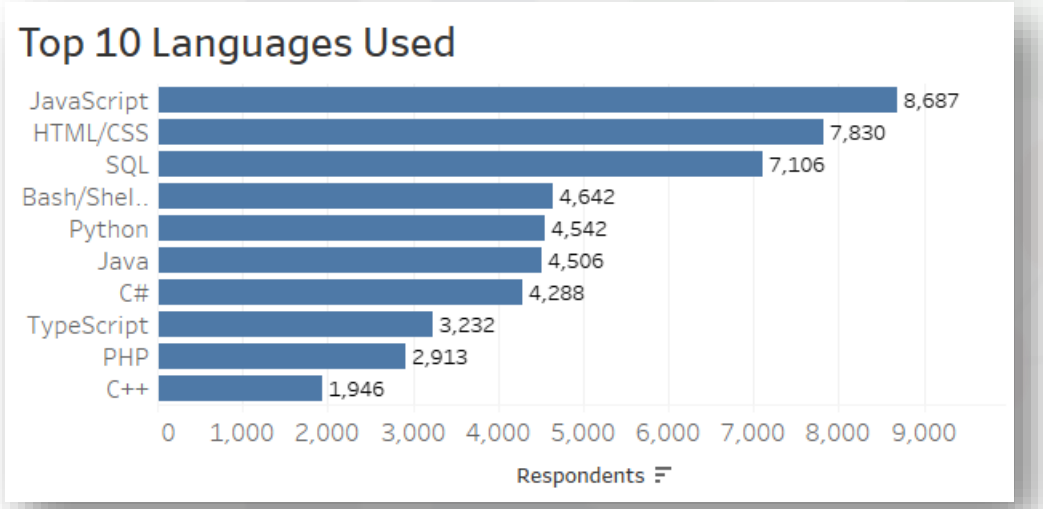
METHODOLOGY

- Job Posting data pulled from an API provided by GitHub to pull Survey results data
- Salary data scraped from an IBM website
- Data analysis performed with Python in Jupyter Lab
- Data Visualizations created using Tableau

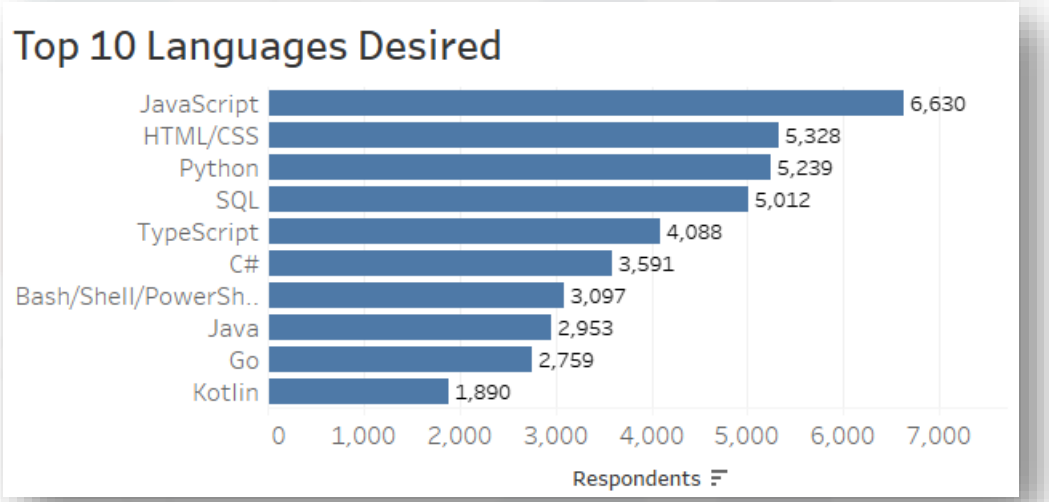
RESULTS – Table of Contents

PROGRAMMING LANGUAGE TRENDS

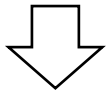
Current Year



Next Year

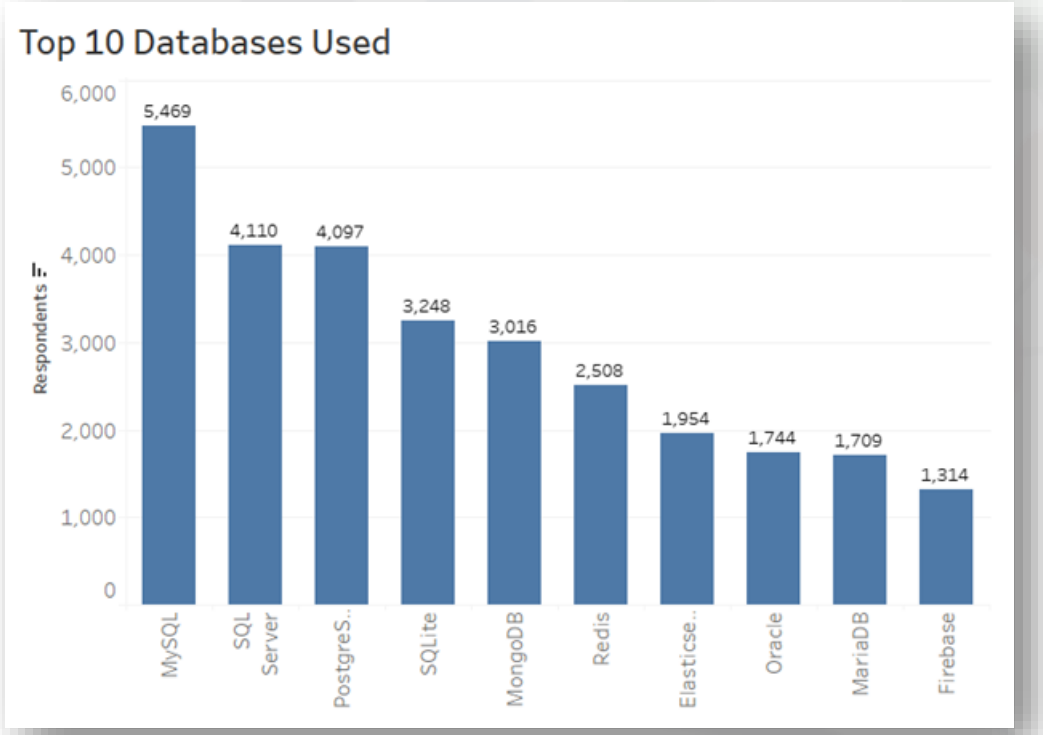


PROGRAMMING LANGUAGE TRENDS – FINDINGS & IMPLICATIONS

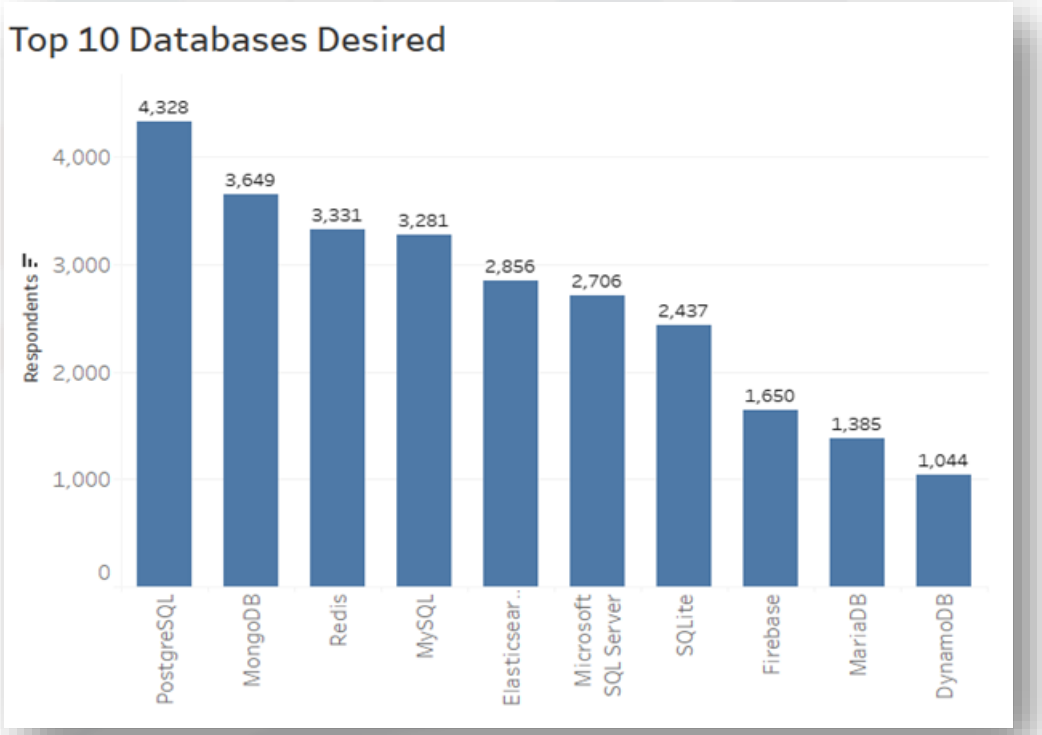
	Finding	Recommendation
	JavaScript and HTML/CSS remain the top languages	**Continue** training and retention programs
	Python, C#, and TypeScript move up the list	**Increase** training and retention programs
	Go and Kotlin are added to the top 10	**Increase** training and retention programs
	SQL and Bash/Shell/PowerShell move down the list	**Decrease** training and retention programs
	PHP and C++ fall off the list	**Decrease** training and retention programs

DATABASE TRENDS

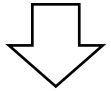
Current Year



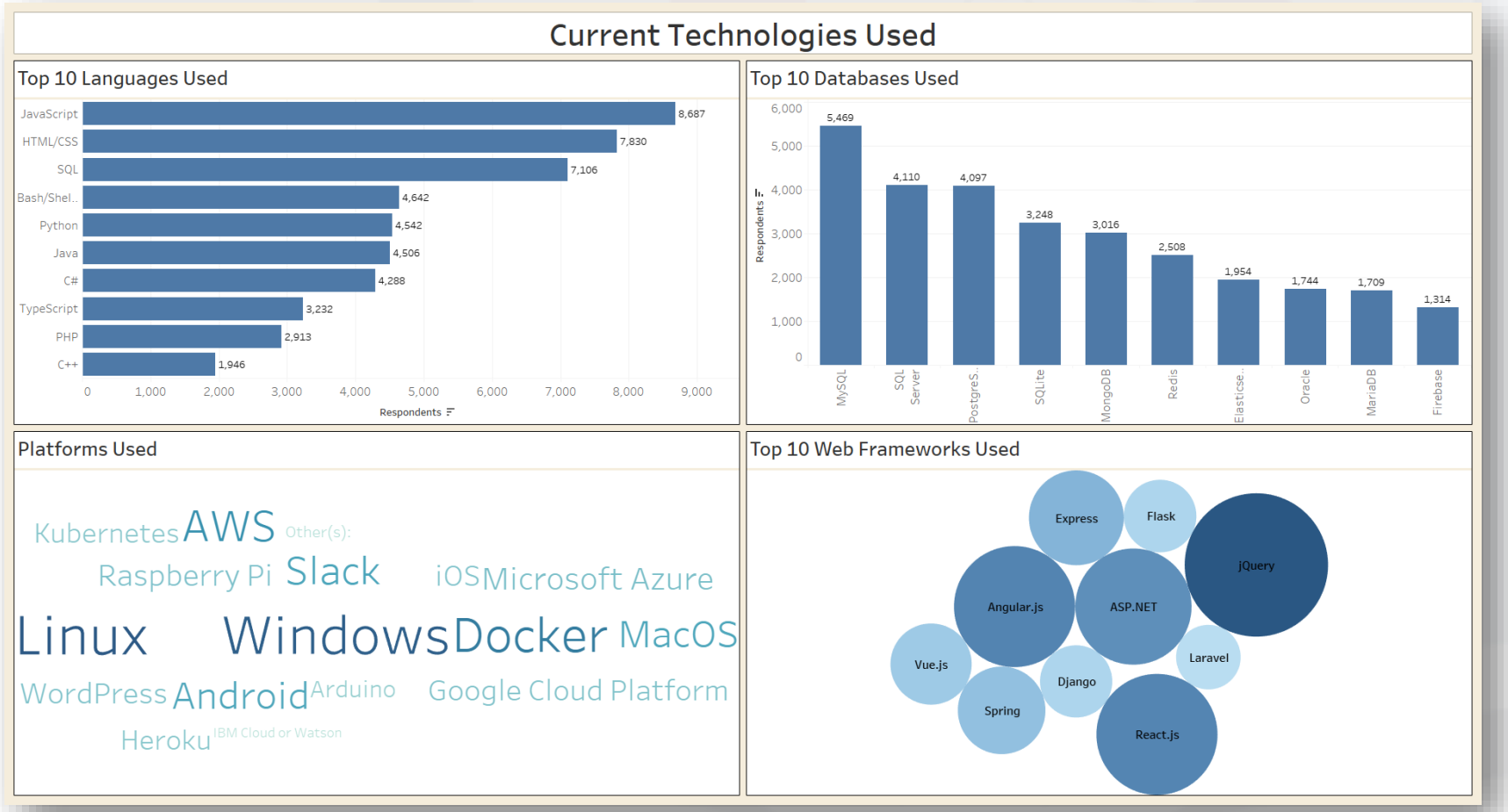
Next Year



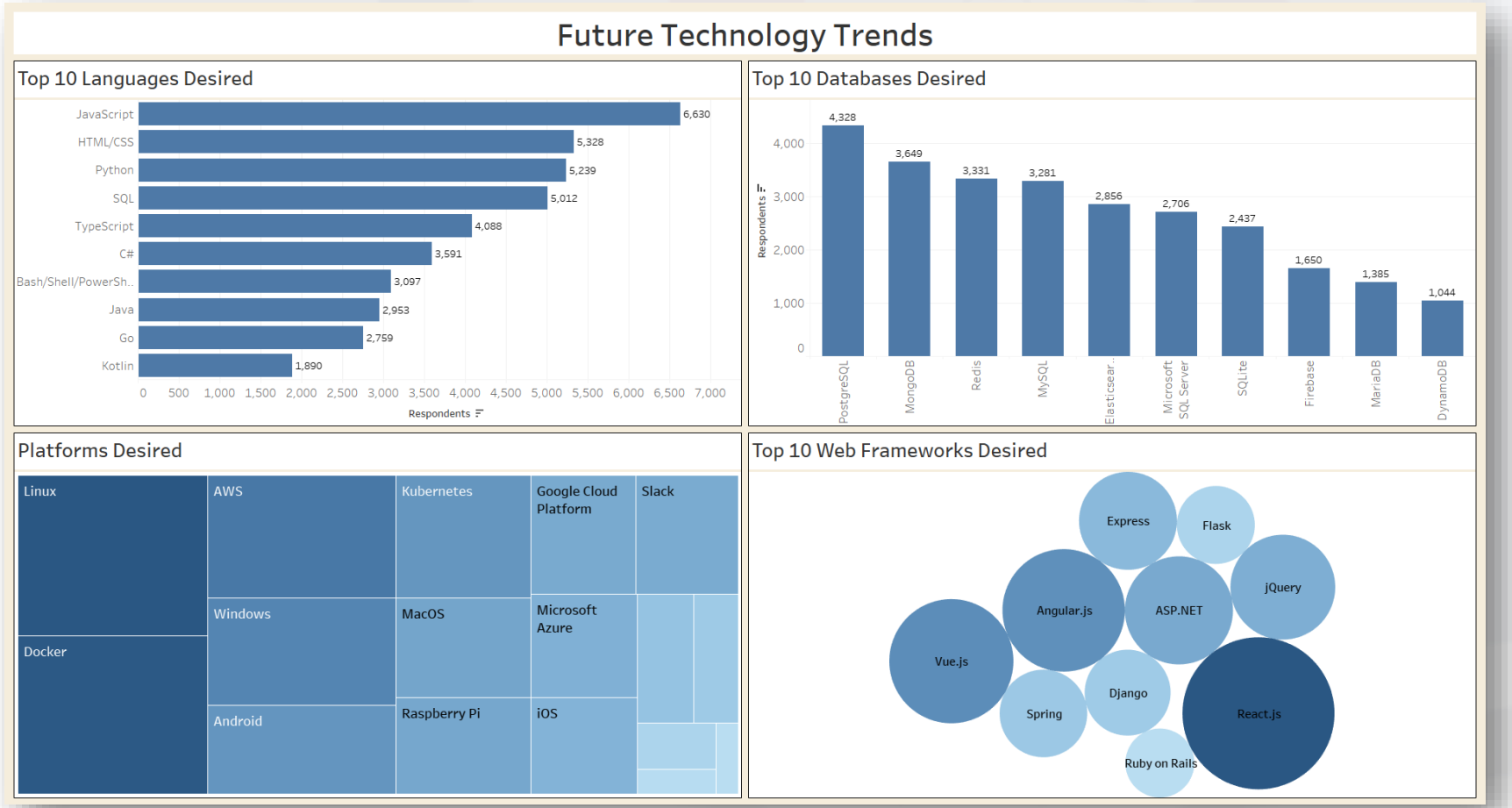
PROGRAMMING LANGUAGE TRENDS – FINDINGS & IMPLICATIONS

	Finding	Recommendation
	There is no crossover in the top 3 spots	**Review** validity of findings
	PostgreSQL, MongoDB, Redis, ElastiSearch, Firebase move up the list	**Increase** training and retention programs
	DynamoDB added to the top 10	**Increase** training and retention programs
	MySQL, Microsoft SQL Server, SQLite move down the list	**Decrease** training and retention programs
	Oracle falls off the list	**Decrease** training and retention programs

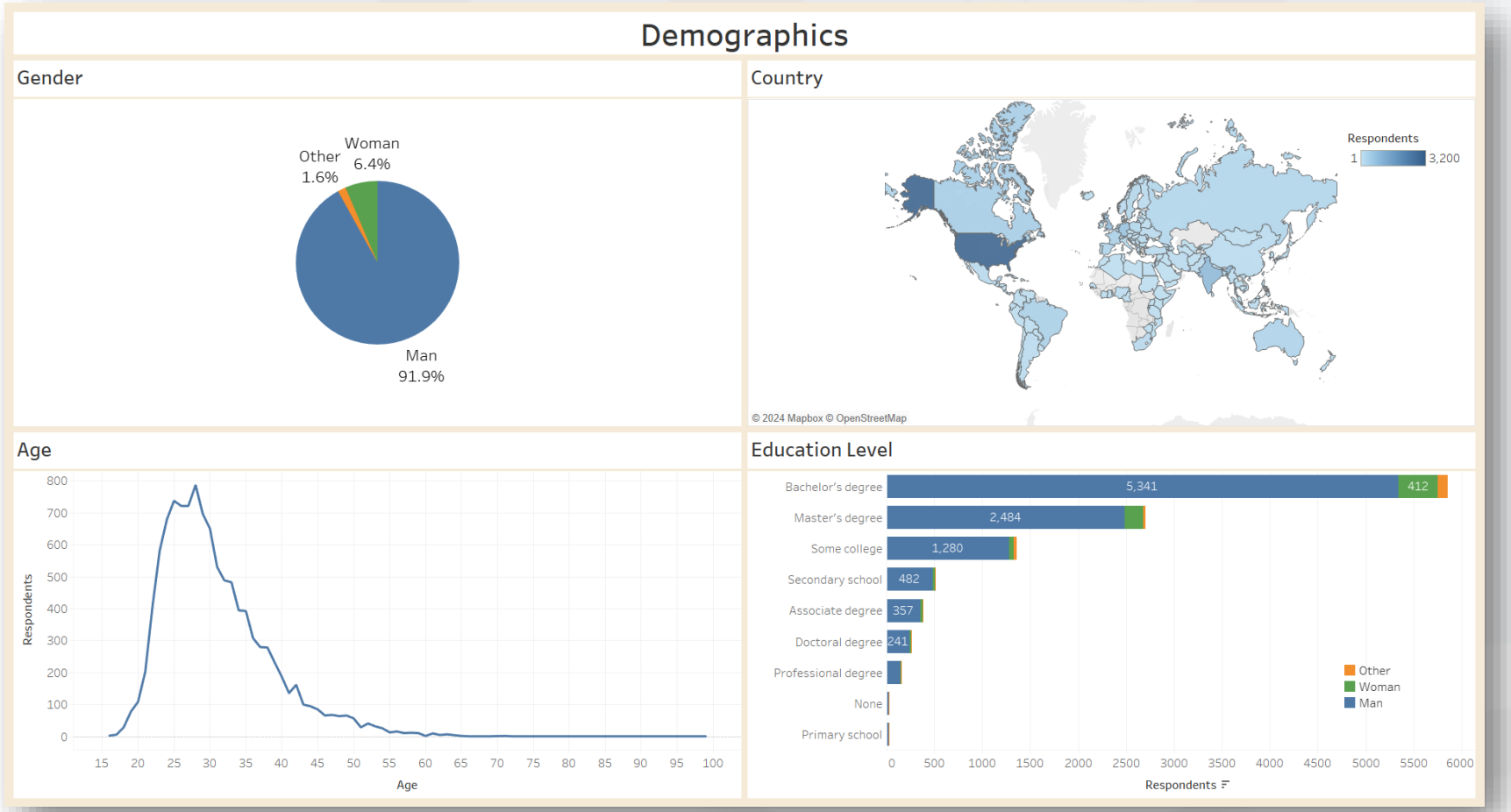
CURRENT TECH USAGE



FUTURE TECHNOLOGY USAGE



DEMOGRAPHICS



FINDINGS

- The top 10 Programming Languages and Databases are largely unchanged, although the rankings are volatile
- Survey respondents were overwhelming male (> 93%)
- Survey respondents were generally younger

CONCLUSION

- While training programs and resource availability should be reviewed, it is unlikely that large changes will need to be made
- Additional validation may be required to ensure that the survey respondents are representative of the technology workforce