TECHNOLOGY TRENDS AND ANALYSIS PRESENTATION

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OUTLINE

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

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EXECUTIVE SUMMARY

- JavaScript, HTML 5, and Python are widely popular, in demand languages

- SQL is necessary to work with popular DBs like MongoDB and PostgreSQL

- The popularity of web languages and database languages imply heavy demand in these sectors

- Better to know multiple languages than a single language

INTRODUCTION

- Students seeking positions after graduation need to be prepared with the languages in demand

- Using current job postings and salary information, as well as survey results from programmers, we can determine which languages are the future

- We can extrapolate from the languages what the best sectors to be in are

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METHODOLOGY

- Github job posting scraped from API
- Github salary information scraped from web
- Survey results from Stack Overflow
  - Popular website for programmers
  - Representative subset of full survey results
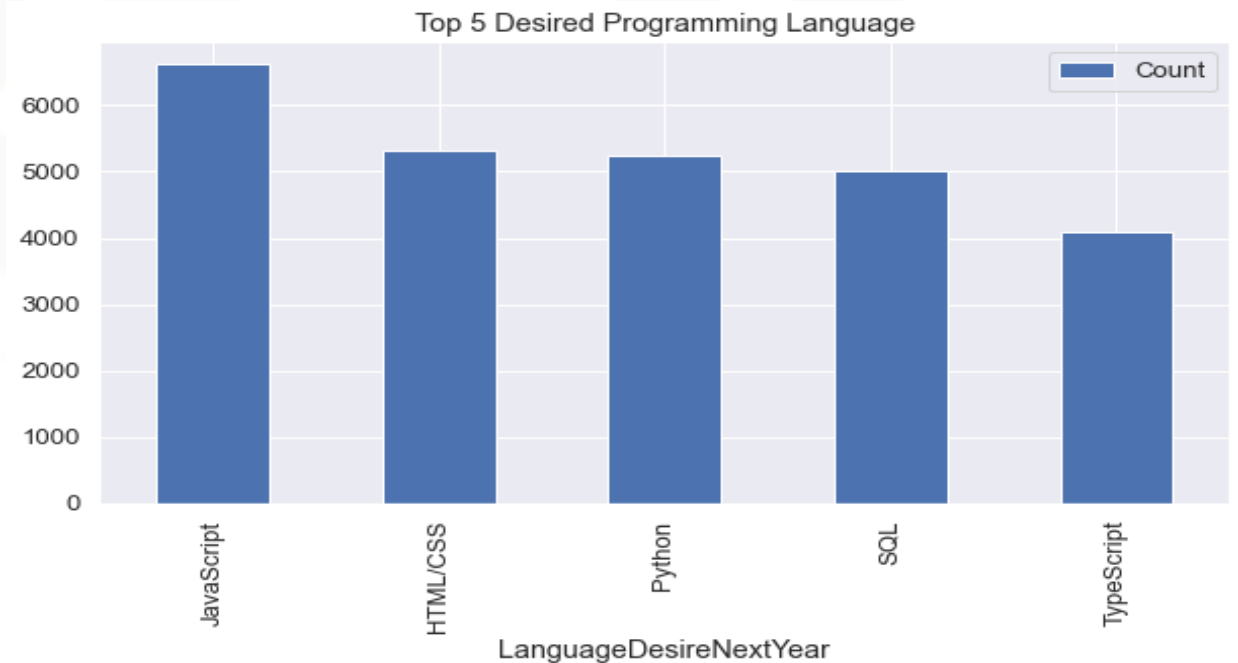
RESULTS

	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

Top 5 Programming Language

Next Year

Top 5 Desired Programming Language
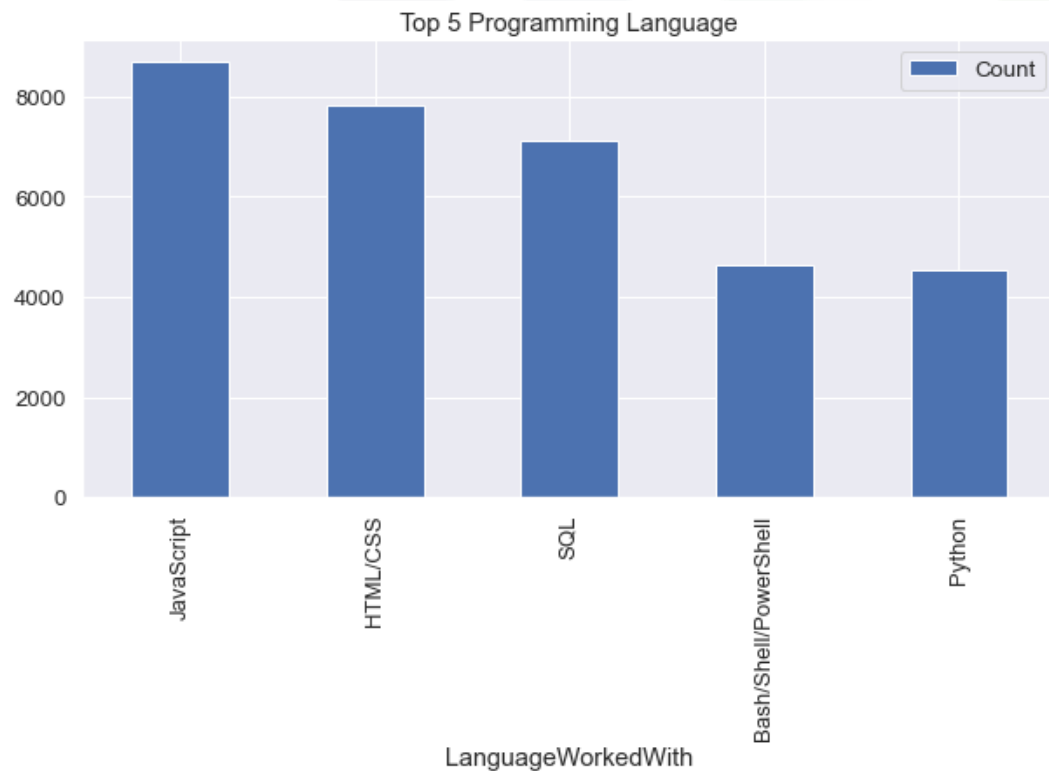
PROGRAMMING LANGUAGE TRENDS – FINDINGS & IMPLICATIONS

Findings

- JavaScript, HTML 5 & Python continue to be popular

- SQL decreases in popularity, but remains high

- Bash/Shell/PowerShell drops

Implications

- Greater demand for JavaScript, HTML 5, and Python programmers

- Bash/Shell/PowerShell decreases in use

- SQL potentially saturated market – remains useful language

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DATABASE TRENDS

Current Year

Next Year

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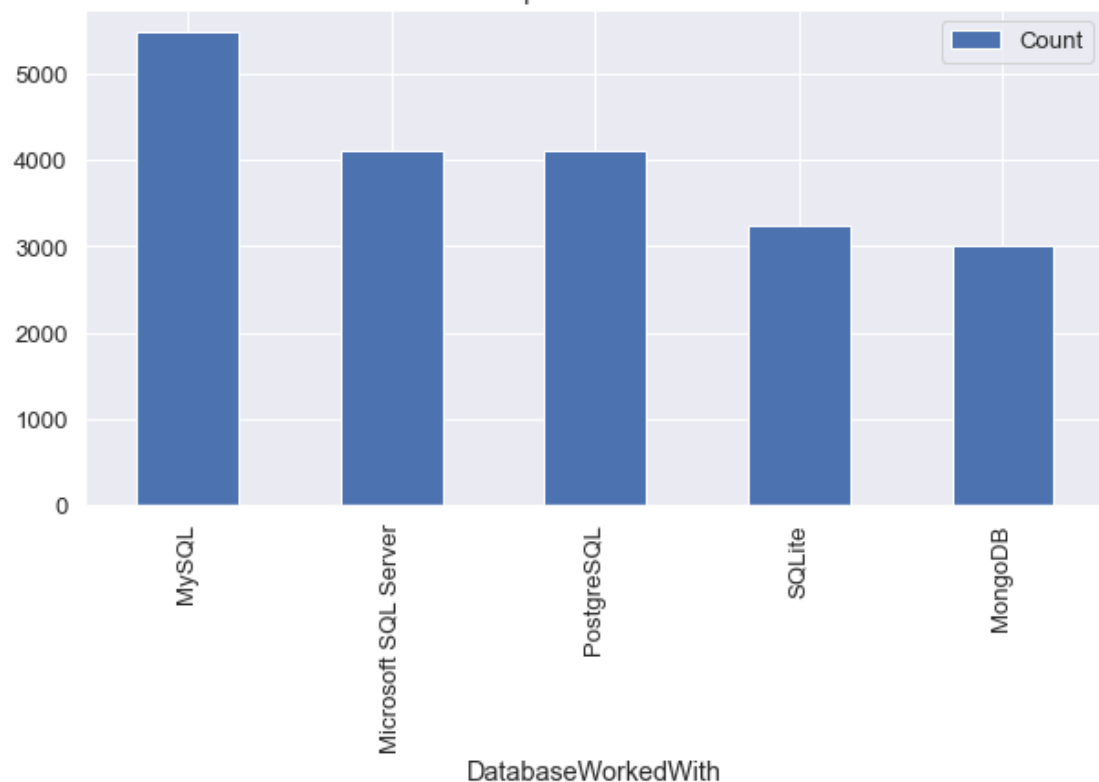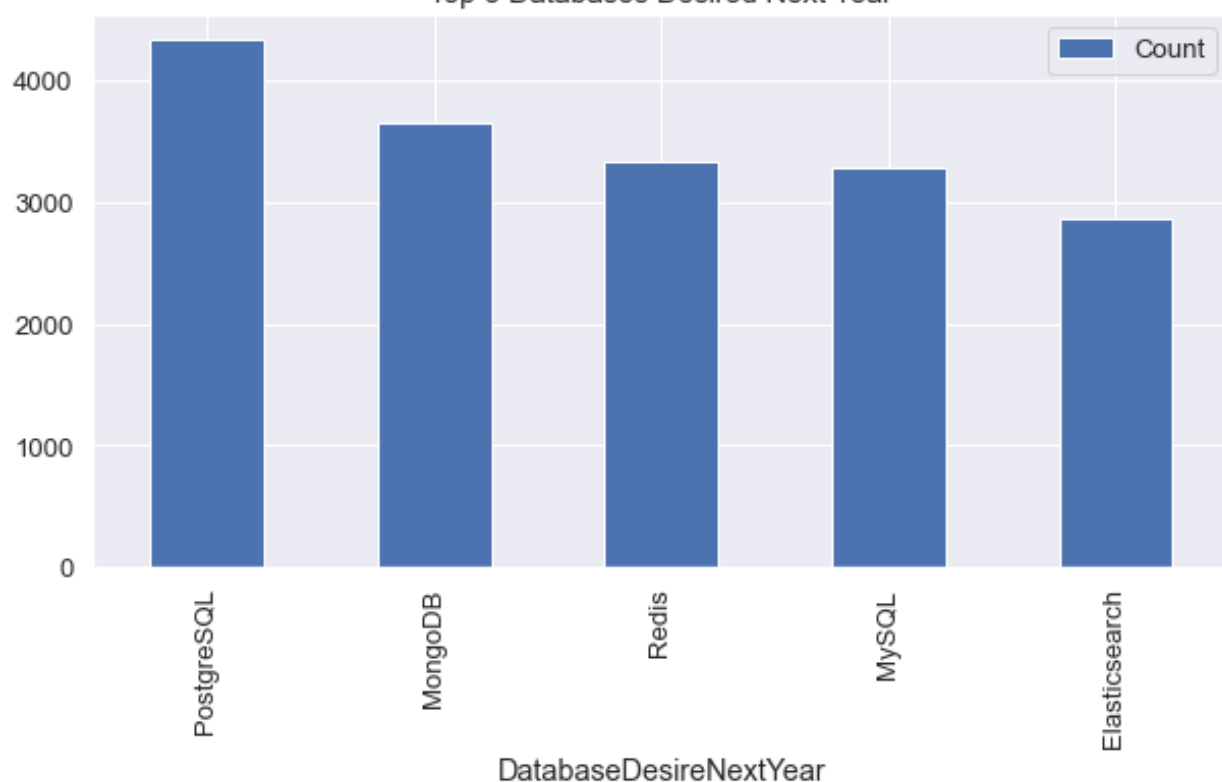
DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL decrease in popularity

- PostgreSQL increase in popularity

- MongoDB increase in popularity

Implications

- MySQL demand is likely lower

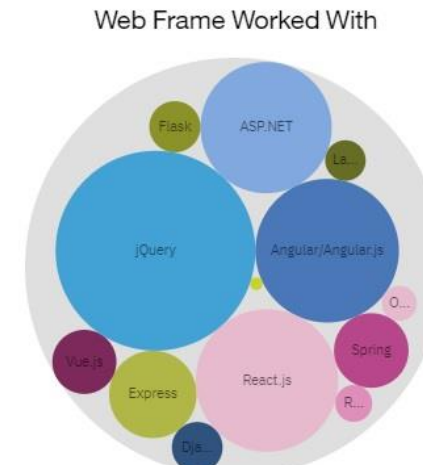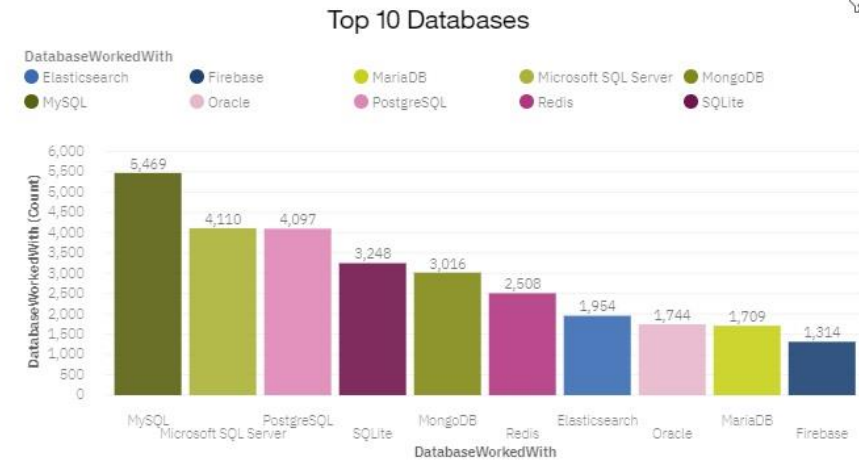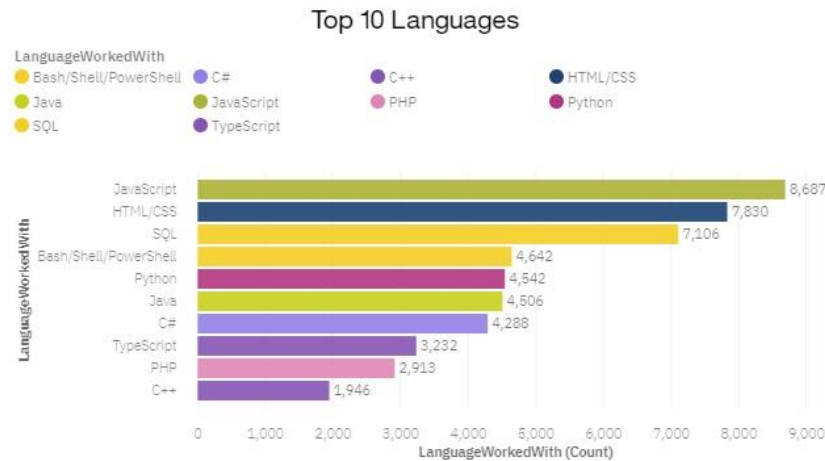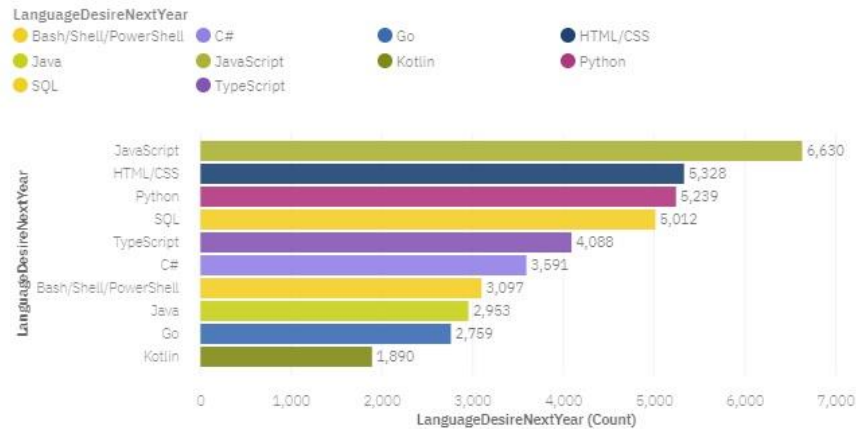- PostgreSQL and MongoDB likely to be future in-demand languages

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DASHBOARD

https://dataplatform.cloud.ibm.com/dashboards/5e125cd5-b399-4c69-b582-9ce42120337a/view/6c3ea30b23973edf68c9c0e4079a25047a317409b3bb825680d37b4959347497a93c1bc5c828185dd2475730a5ea17589b

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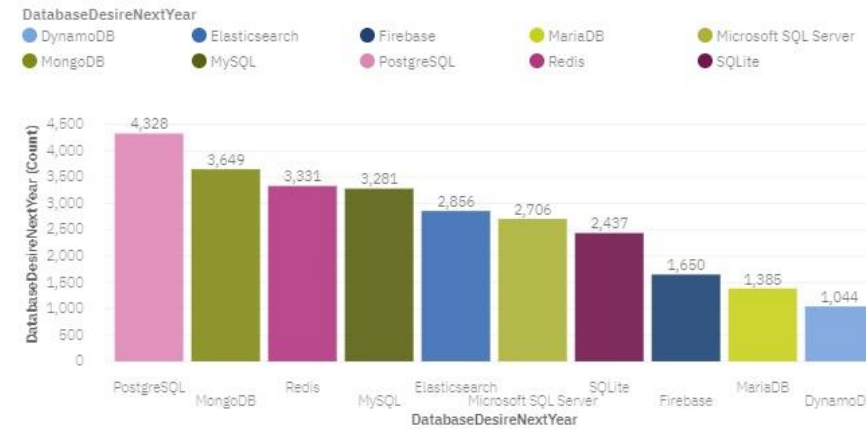
CURRENT TECHNOLOGY USAGE

Top 10 Languages

Top 10 Databases

Platforms Worked With

Web Frame Worked With

FUTURE TECHNOLOGY TREND

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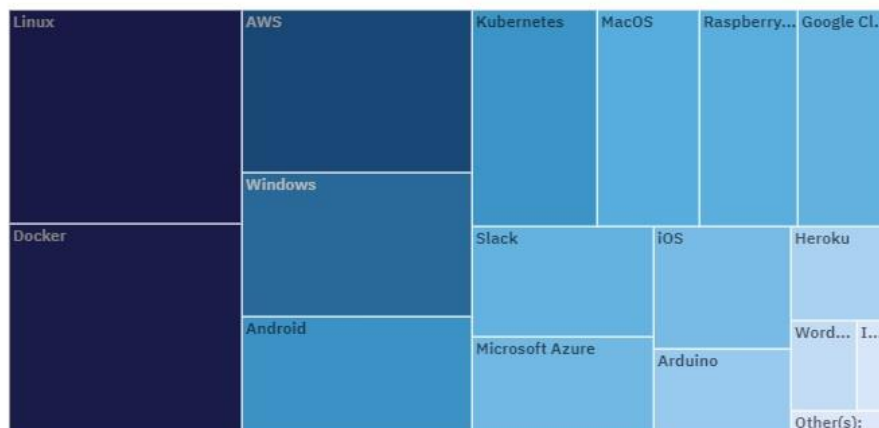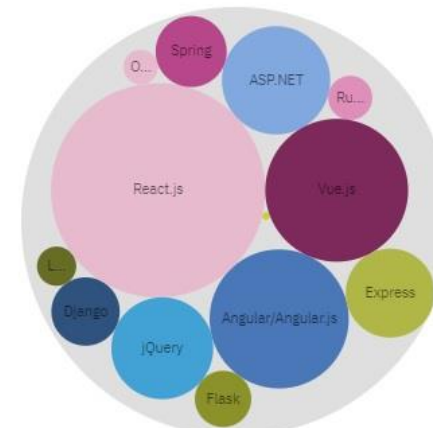
DEMOGRAPHICS
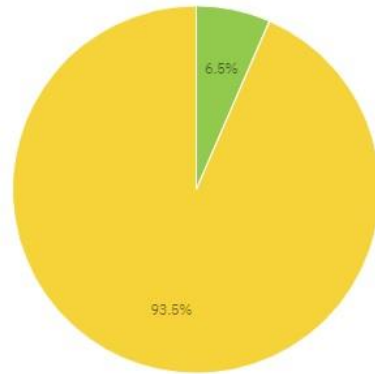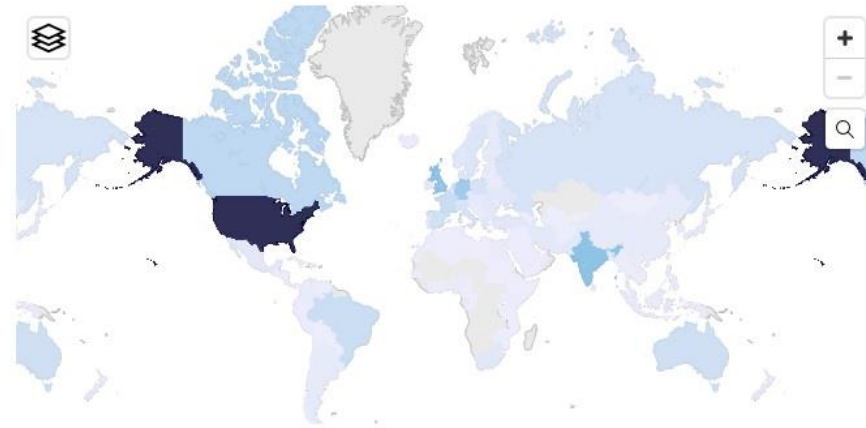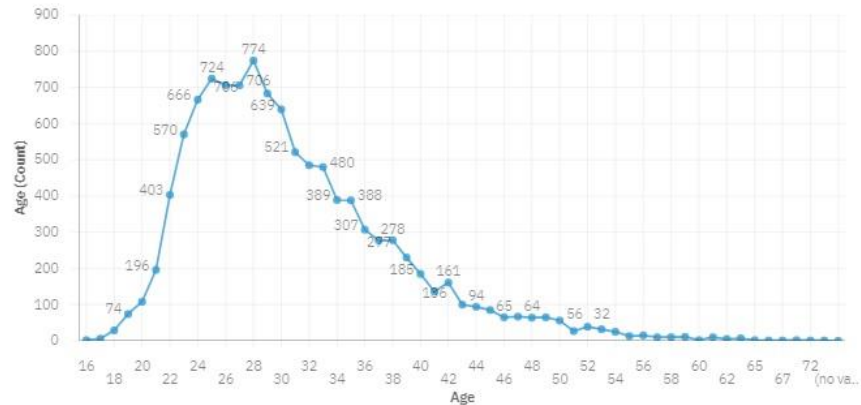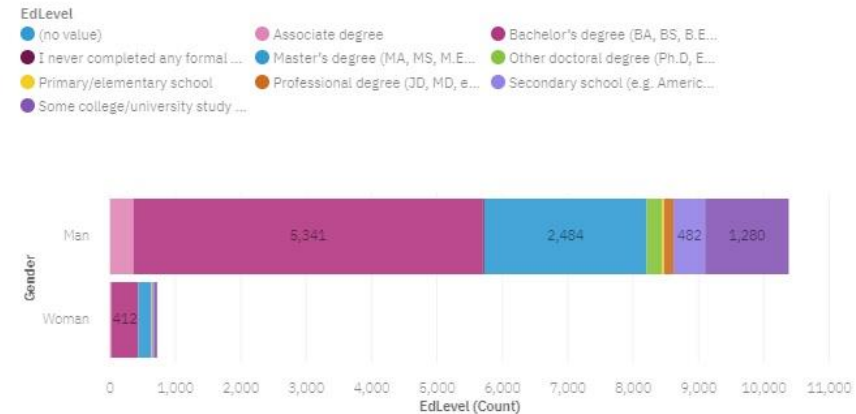
DISCUSSION

- Python, HTML 5, and JavaScript are perennially popular, widely used languages with broad support

- Niche languages, like Swift, are not present in large numbers

- While increasing in popularity among programmers, MongoDB has relatively few job openings

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OVERALL FINDINGS & IMPLICATIONS

Findings

- JavaScript, HTML 5, and Python most popular language and in demand

- SQL popularity is robust – DBs like MongoDB and PostgreSQL jump in popularity

- Web and DB languages most popular

Implications

- JavaScript, HTML 5, and Python remain best languages to learn

- SQL and DBs are increasing in use and popularity
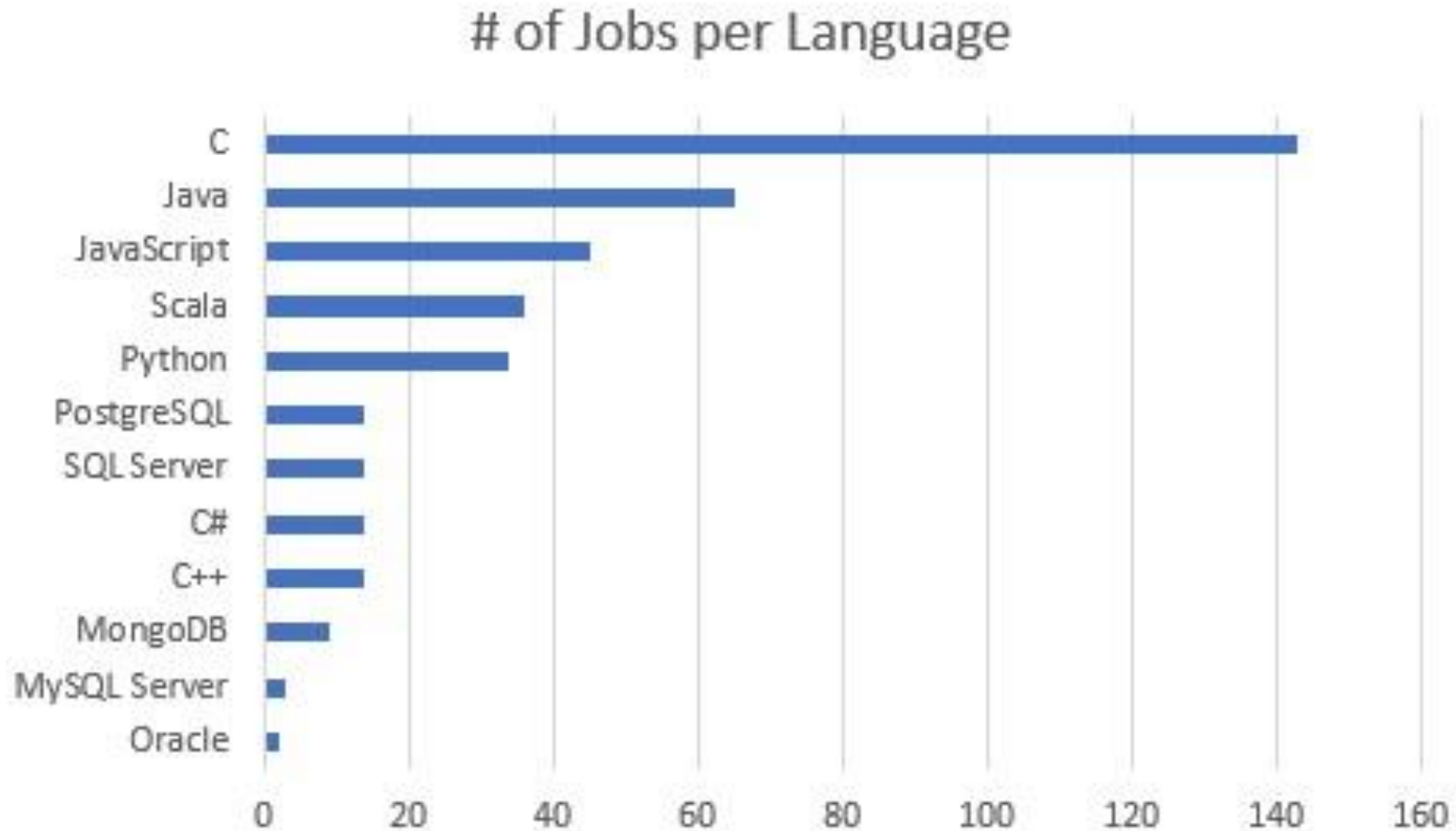
- Web programming and DB programming have strong future

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CONCLUSION

- It is best to learn multiple languages in order to secure a position

- Python and JavaScript are highly sought after – #2 and #5 in Github job postings

- SQL is important in dealing with multiple databases – MongoDB and PostgreSQL especially

- Web programming and Database programming are the sectors seeing increases

GITHUB JOB POSTINGS

# of Jobs per Language

POPULAR LANGUAGES

Average Annual Salary