Technology Trends

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EXECUTIVE SUMMARY

- The most popular programming languages are web-based one such as JavaScript and HTML/CSS.
- Cloud-based service is getting more relevant
- The most popular web frameworks are React.js, Angular.js and jQuery.
- non-relational databases is getting more relevant.

INTRODUCTION

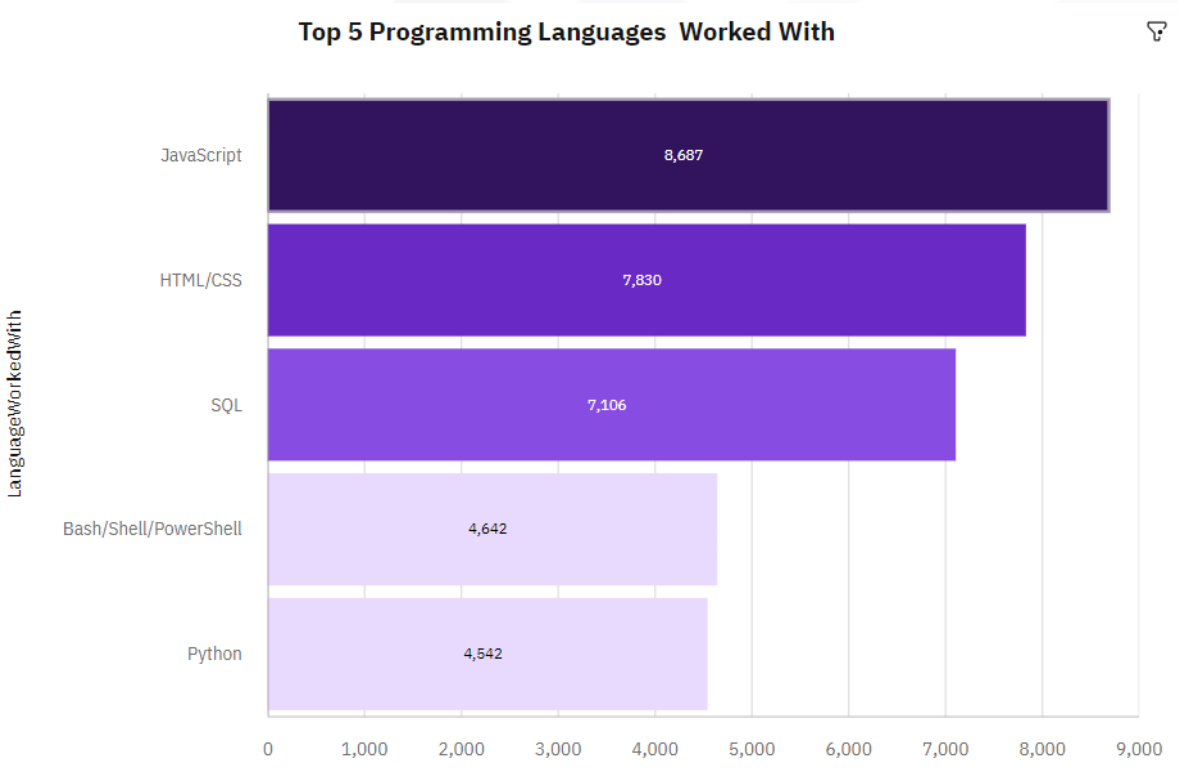
- About: Analyzing the trends in software development
- Purpose: Identify skill requirements for future.
- What are the top programming languages in demand?
- What are the top database skills in demand?
- What are the top platforms?
- What are the top web-frameworks in demand?
- Is there a gender gap in the tech industry?

METHODOLOGY

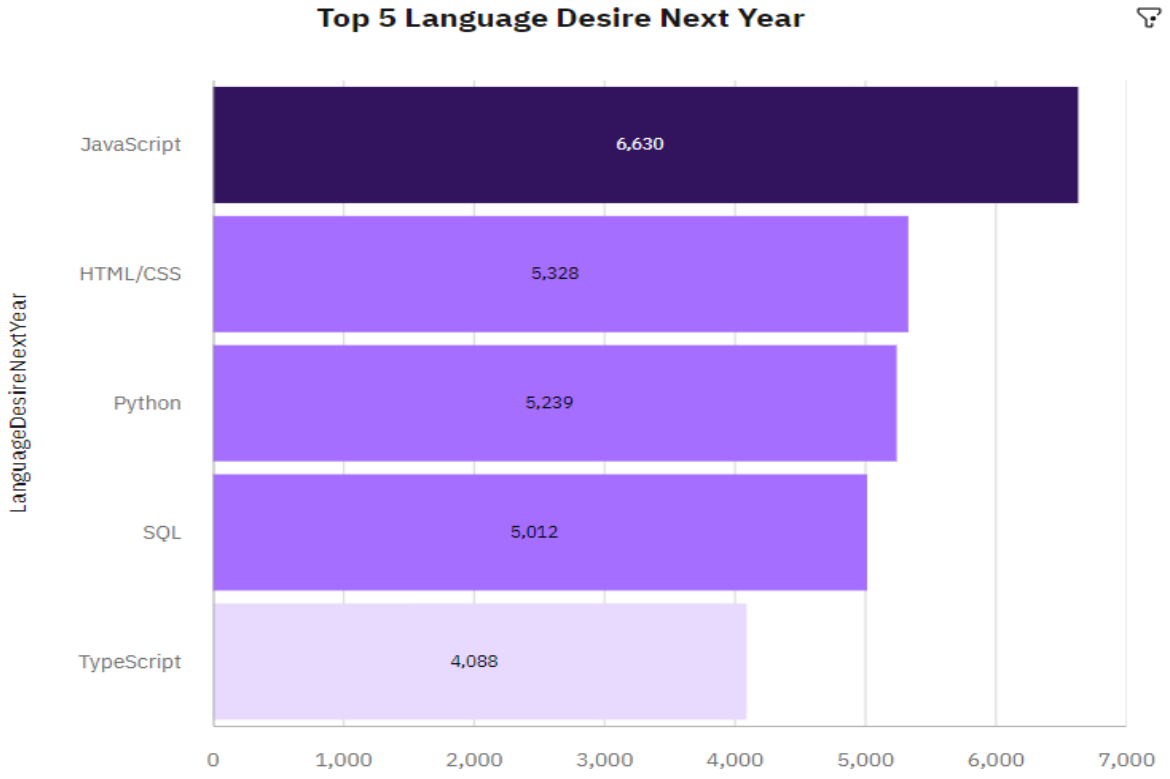
- Data Collection Sources:
  - Stack Overflow Developer 2019 Survey
  - GitHub Job Postings API
- Data Wrangling
- Data Analyzing
- Data Visualization
- Building Dashboard
- Presentation

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

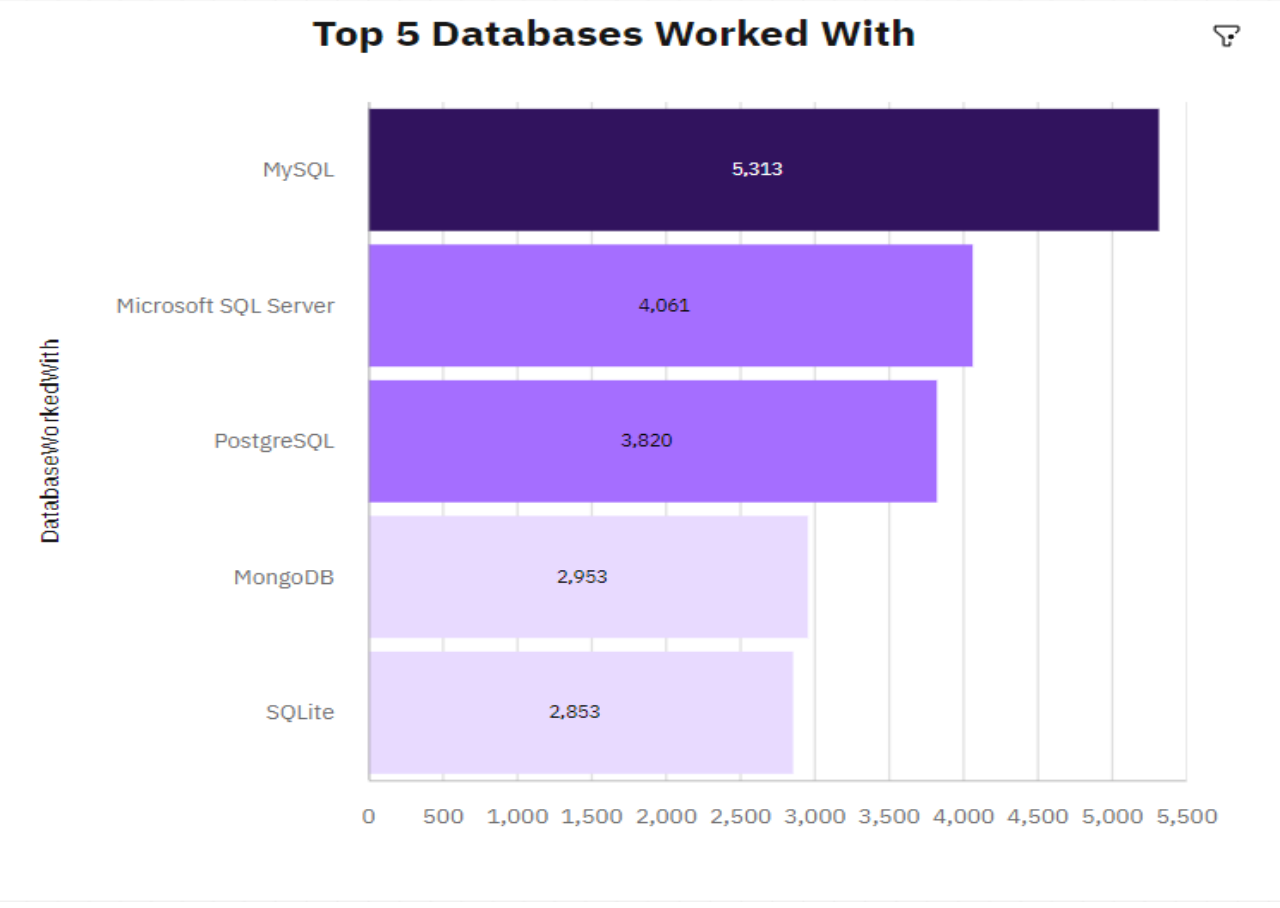
- JavaScript & HTML/CSS are top programming languages for both current and future trend.
- Python moves from 5th position to 3rd position.
- PowerShell disappeared from top 5

Implications

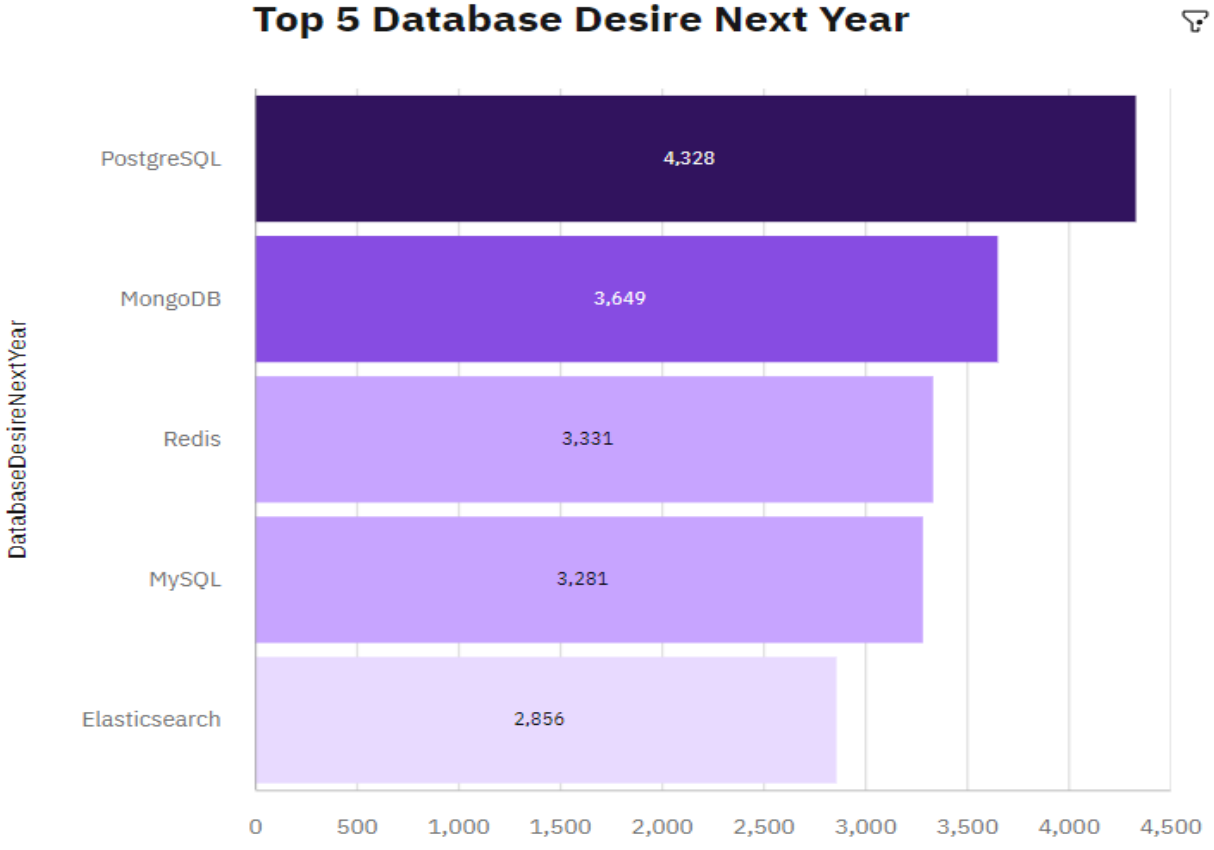
- Web programming languages are still in high demand.
- Python becoming more popular because of the importance of AI and ML
- Scripting languages getting out of interest compared to others

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MongoDB , PostgreSQL and Redis are getting more popular.
- MYSQL drops from No.1 to No.4.
- MS SQL and SQLITE drops out of top 5.

Implications

- Open-source database is the most preferable than commercial databases .
- Non-relational database see increasingly usage in the future.
- Relational database still has the leading in the future.
- Redis supports abstract data types.

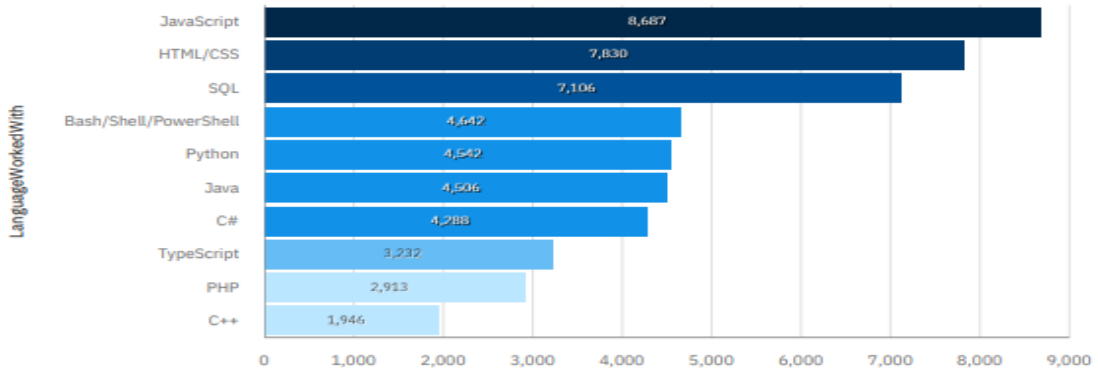
DASHBOARD

https://eu2.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FIBM%2Bcapstone&action=view&mode=dashboard&subView=model000001836bb2f9d4_00000000

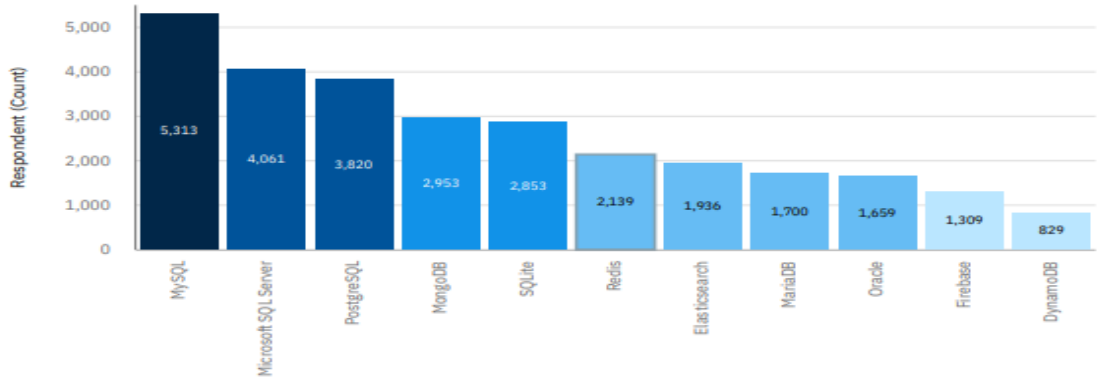
DASHBOARD TAB 1

Current Technology Usage

Top 10 Languages Worked With

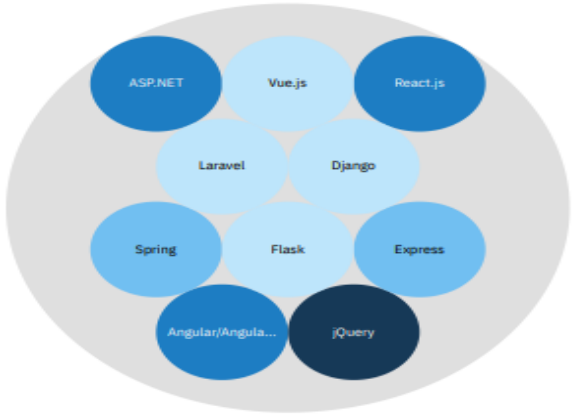


Top 10 Databases Worked With



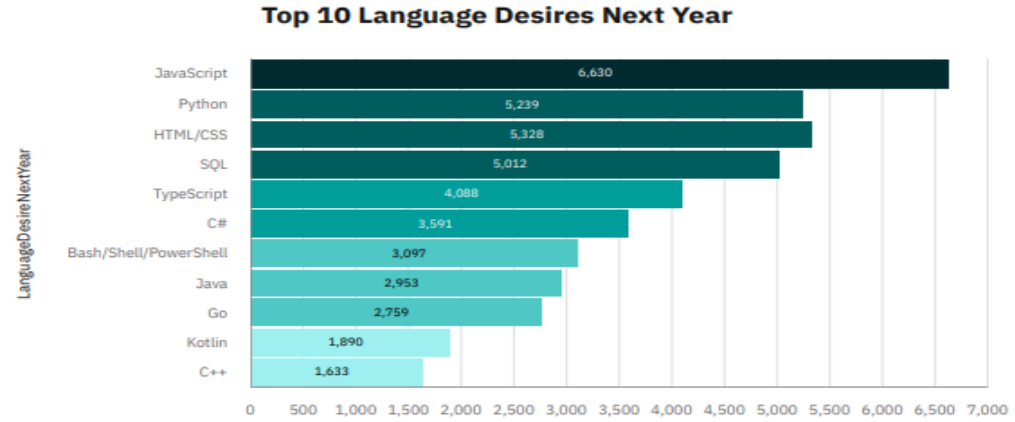
Platform Worked With

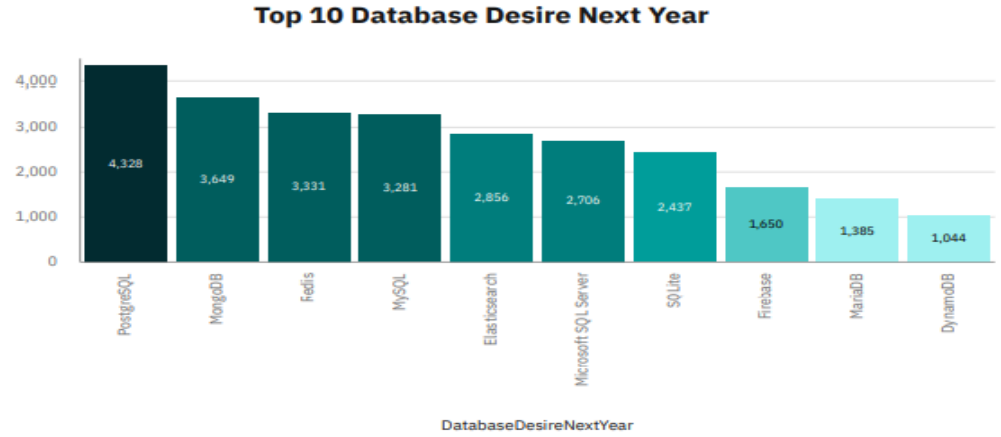
Top 10 WebFrame Worked With

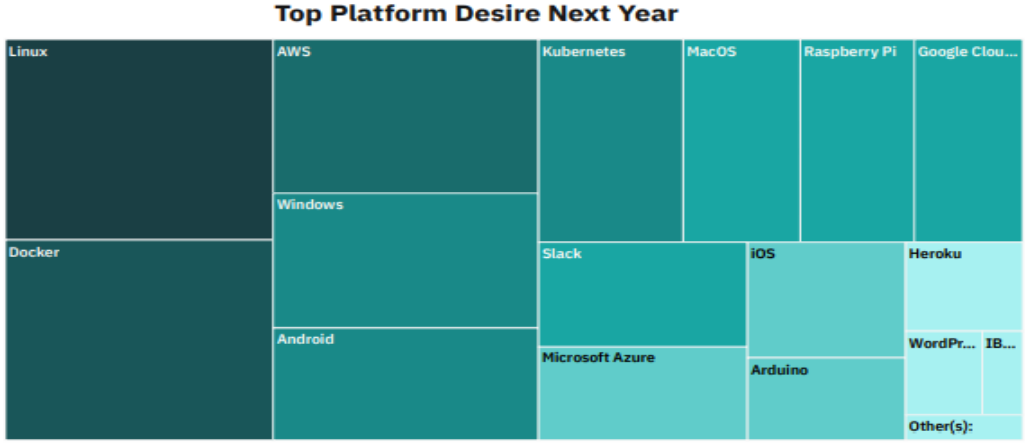


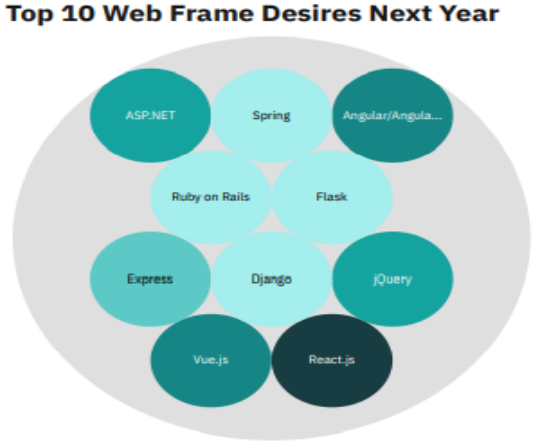
DASHBOARD TAB 2

Future Technology Trend



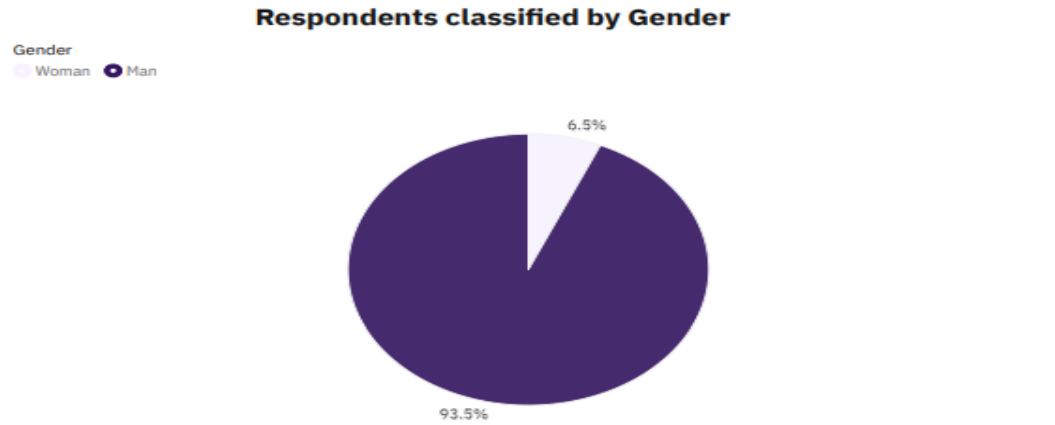


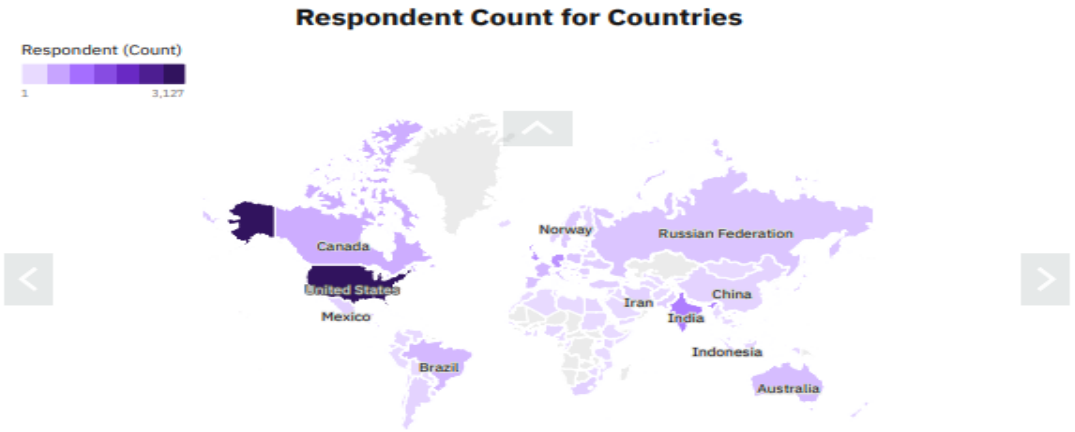


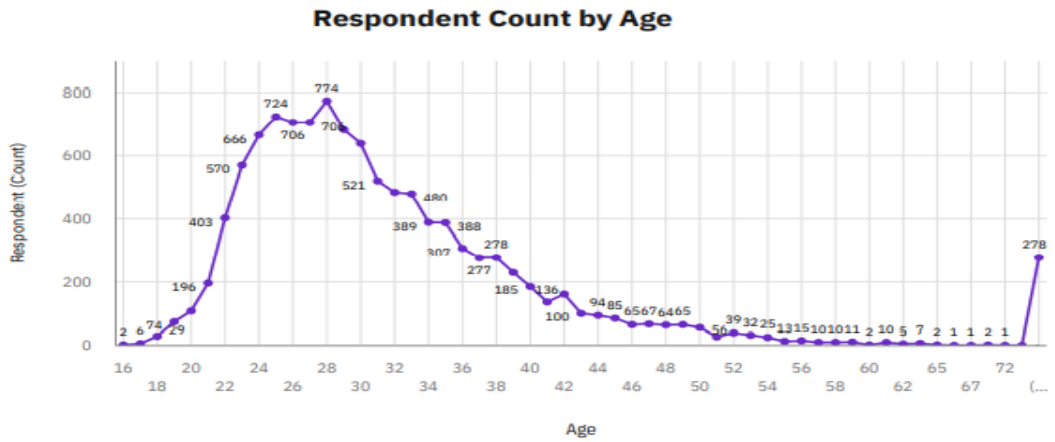


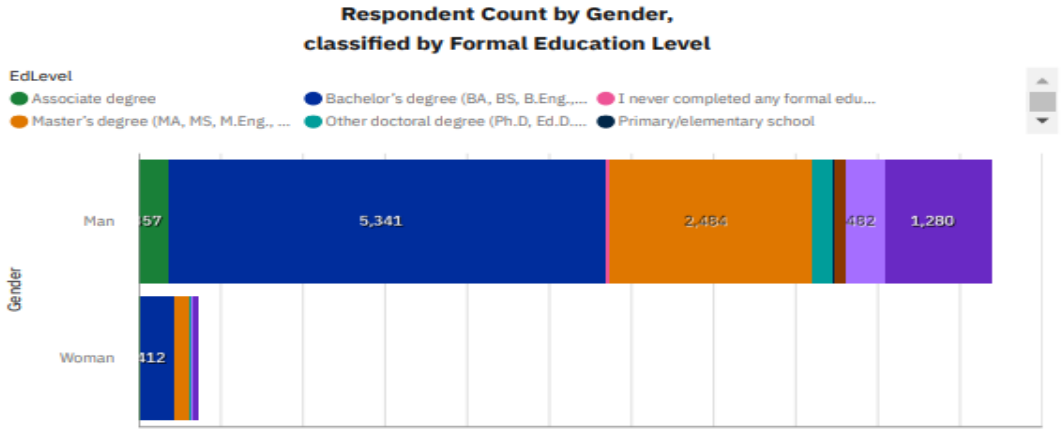
DASHBOARD TAB 3

Demographics

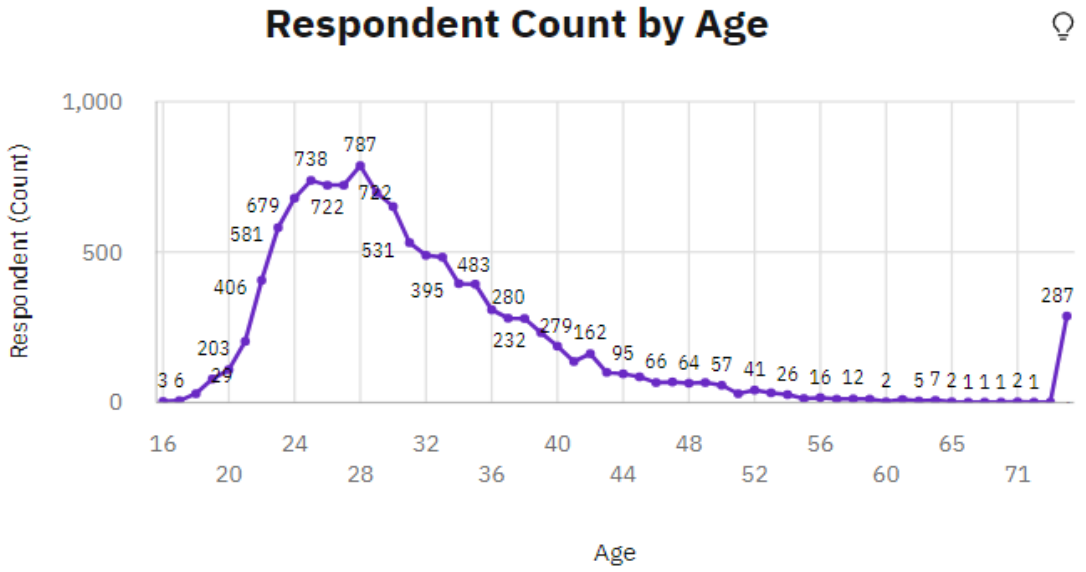








DISCUSSION



Majority of respondents ages between 24 and 30 this could skew the results for recent technologies.

OVERALL FINDINGS & IMPLICATIONS

Findings

- The most popular languages are web based (JS, HTML/CSS)
- The most used upcoming web framework is React.js
- Platforms like Docker and AWS are growing in the future
- Gender gap in tech industry
- Changing in technology every year
- Non-relational database is getting more popular

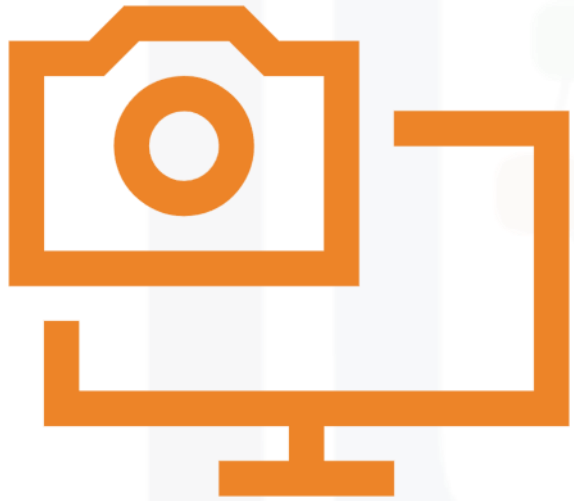
Implications

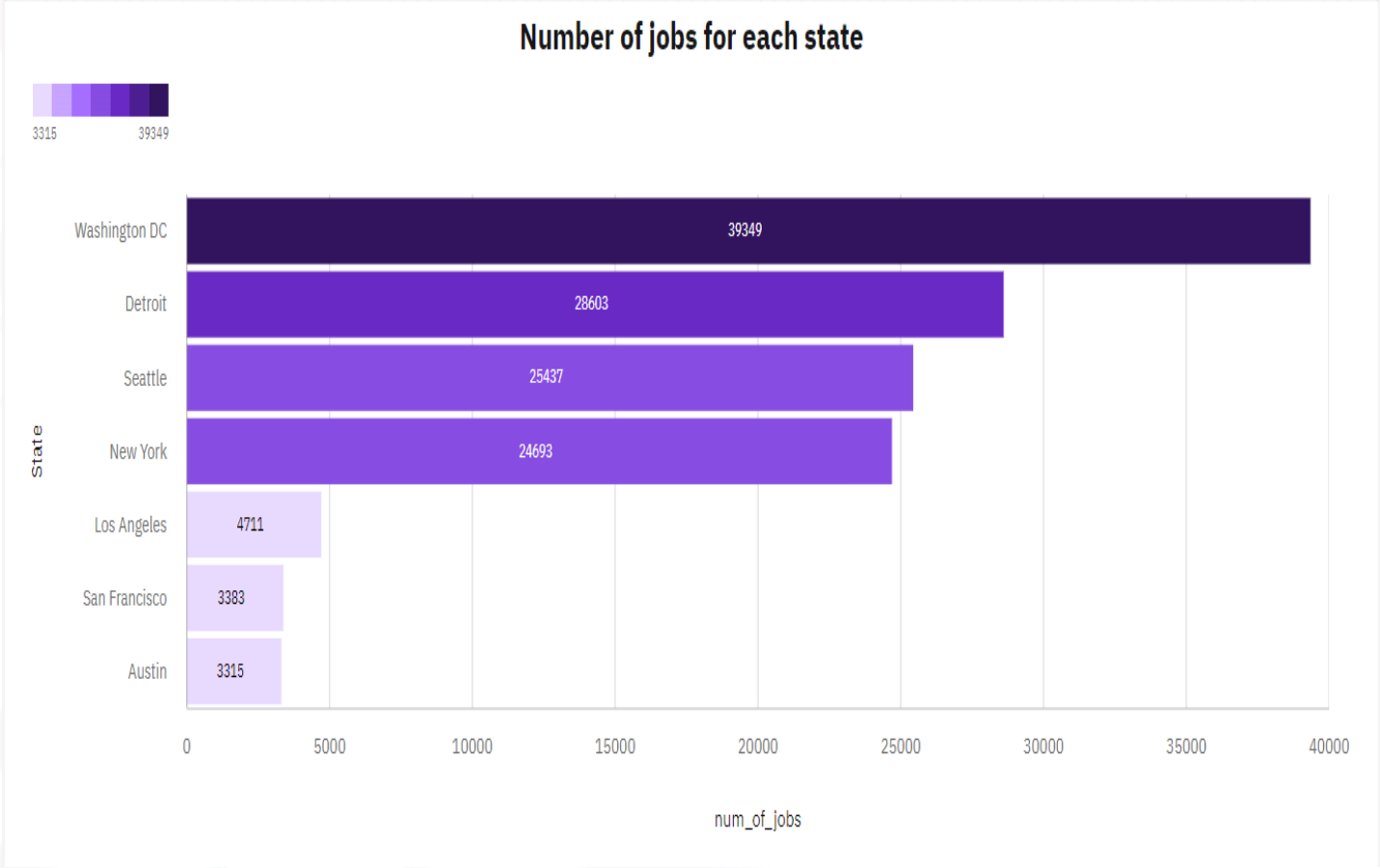
- Web based application is taking over the other application.
- Developers need to be flexible and adjust to rapid changes
- Impact of job hiring
- Shift to faster app deployments and cloud services in future
- More semi-structured and unstructured data is being analyzed.

CONCLUSION

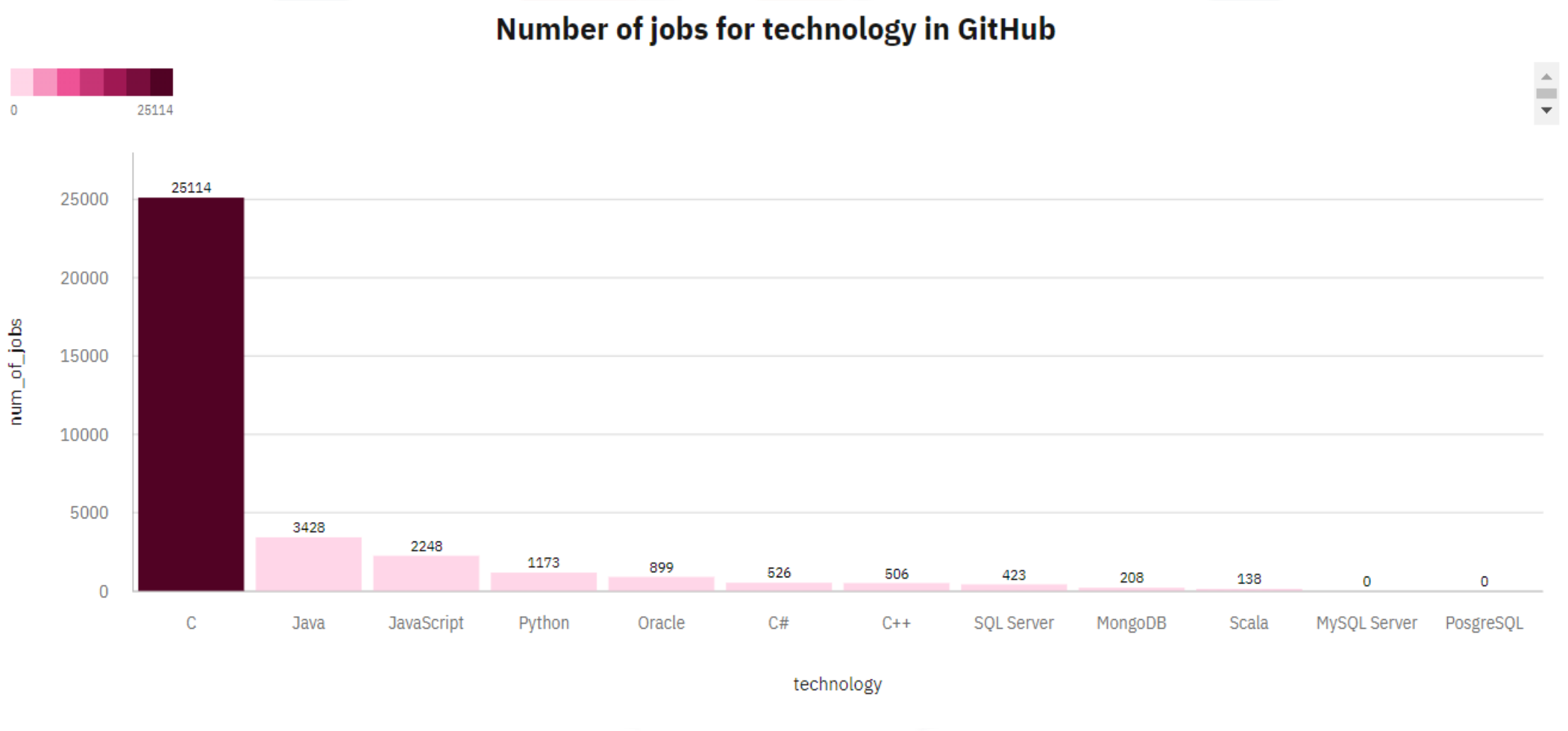
- It’s important to learn web languages and non-relational database, To stay relevant in the tech industry
- Cloud-based service is the right direction for IT investment.
- Among web frameworks, React.js is the best to learn for the future.
- There is a big gender gap in the tech industry

APPENDIX

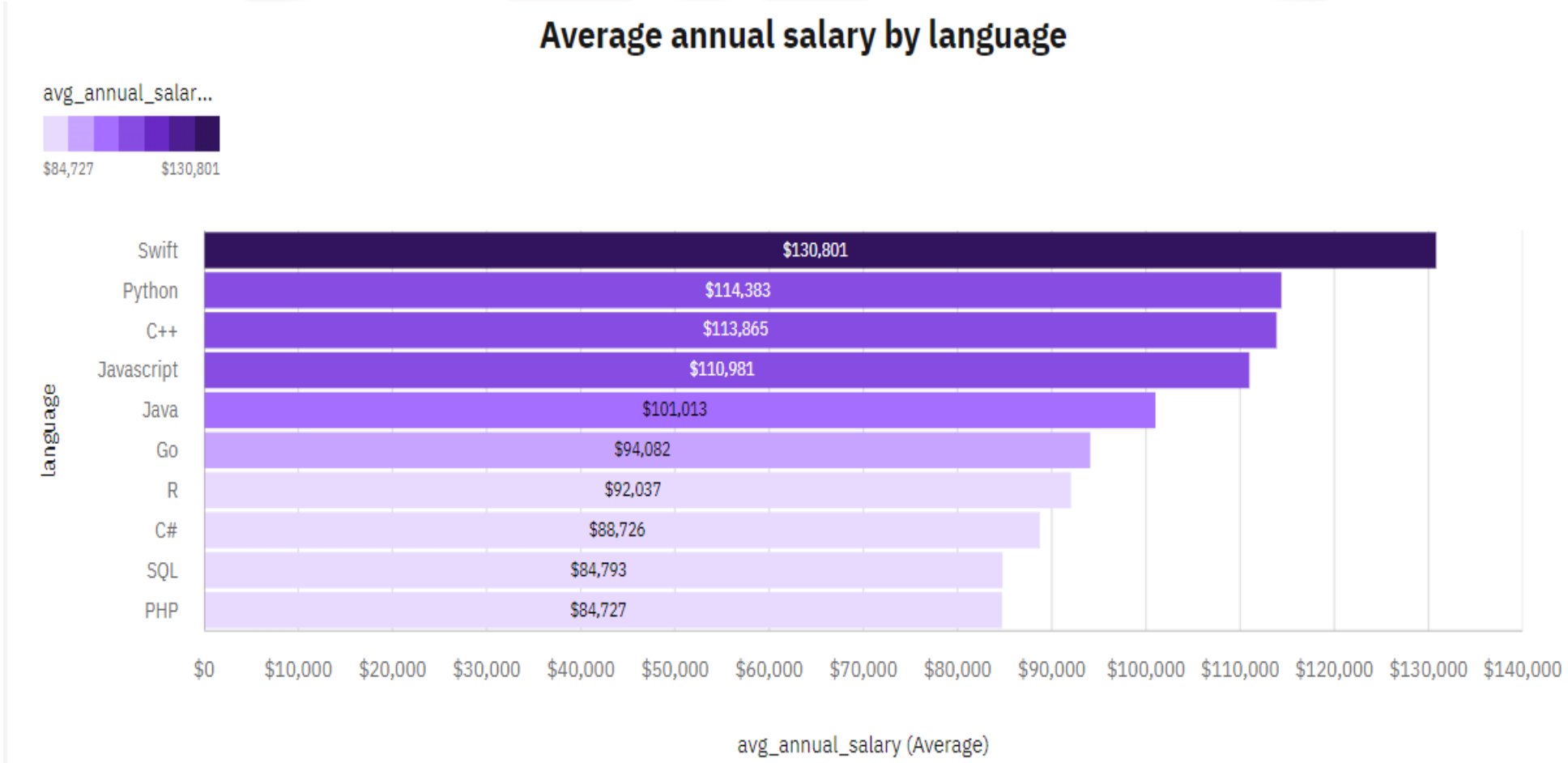



Number of jobs for each state
3315
39349
Washington DC
Detroit
Seattle
New York
Los Angeles
San Francisco
Austin
39349
28603
25437
24693
4711
3383
3315
State
0
5000
10000
15000
20000
25000
30000
35000
40000
num_of_jobs

JOB POSTINGS



POPULAR LANGUAGES



Thank you

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