Technology trend analysis

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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 and Future technology trends in
  - Programming languages
  - Databases
  - Platforms
  - WebFrameworks
- Demographics survey
  - Gender gap
  - Technological gap in countries
  - Formal education level

INTRODUCTION

Talk about:

Analyzing the trends in software and web development around the world.

Purpose:

- Identify the top programming languages, databases, platforms and webframeworks.
- Identify skills requirement for future.
- Identify technological gap in countries.
- Identify human resources gap.

Audience:

- IT specialist.
- Students.

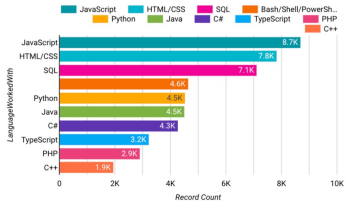
METHODOLOGY

- Data Collection using Webscraping
- Data Cleaning
- Data Exploration
- Data Visualization
  - Google Looker Studio (for dashboards)
  - Python (Matplotlib) (for single charts)

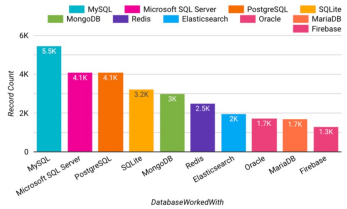
RESULTS

Current Technology Usage

Top 10 Language Worked With

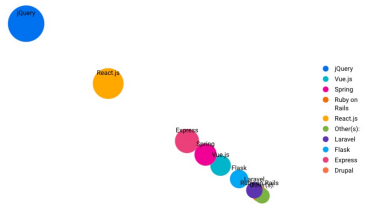


Top 10 Database Worked With



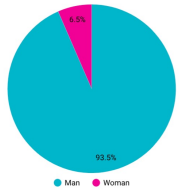
Platform Worked With

Top 10 WebFrameworks Worked With

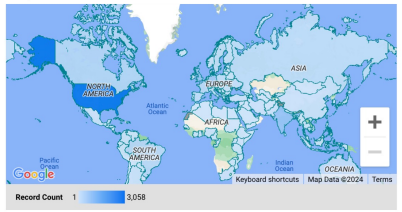


Demographics

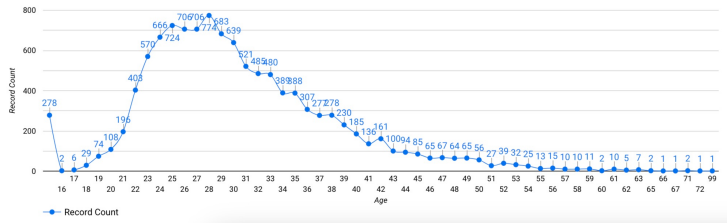
Respondent classified by Gender



Respondent Count for Countries

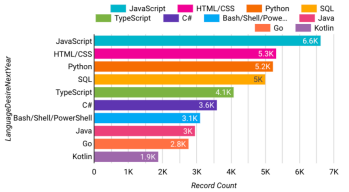


Respondent Count by Age

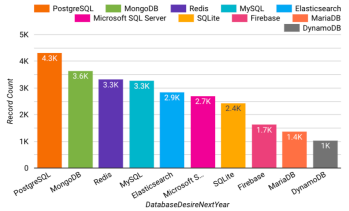


Future Technology Trend

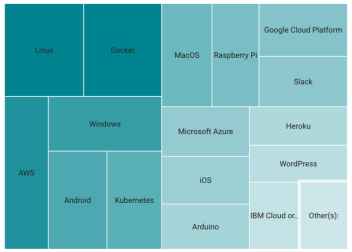
Top 10 Language Desire Next Year



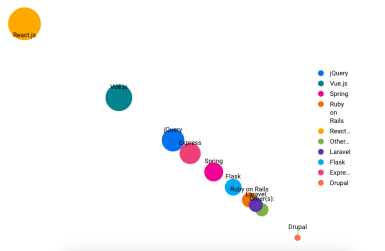
Top 10 Database Desire Next Year



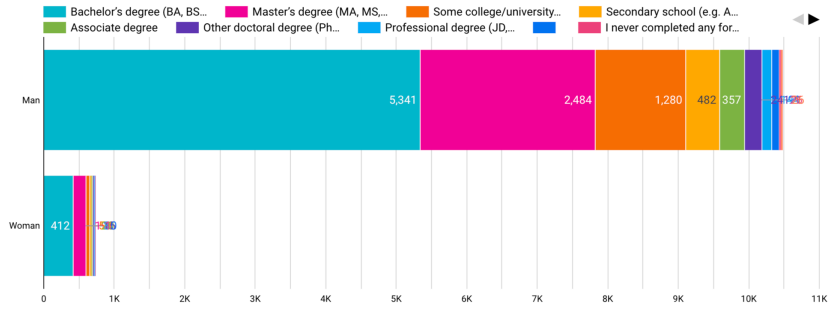
Platform Desire Next Year



Top 10 Web Frameworks Desire Next Year



Respondent Count by Gender, classified by Formal Education Level

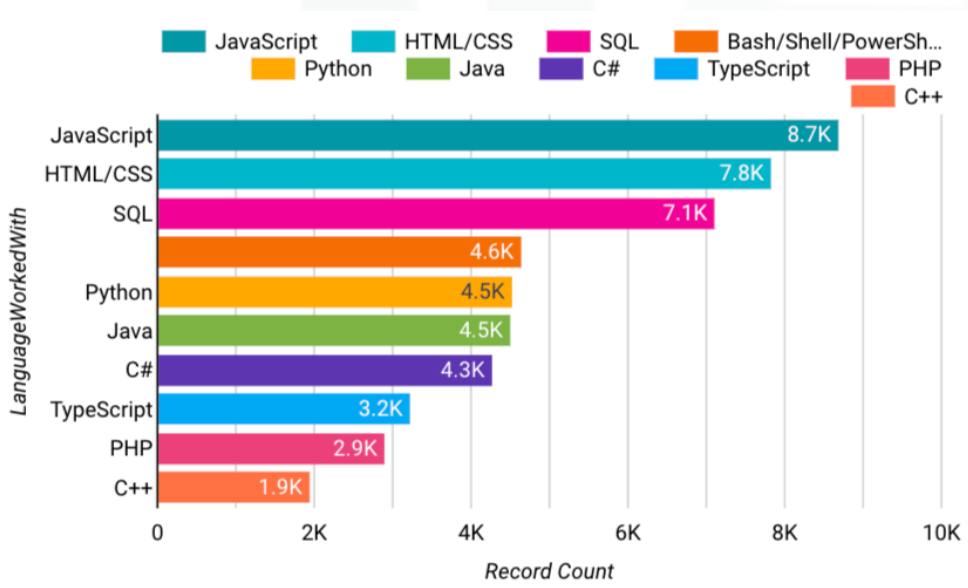


IBM Developer

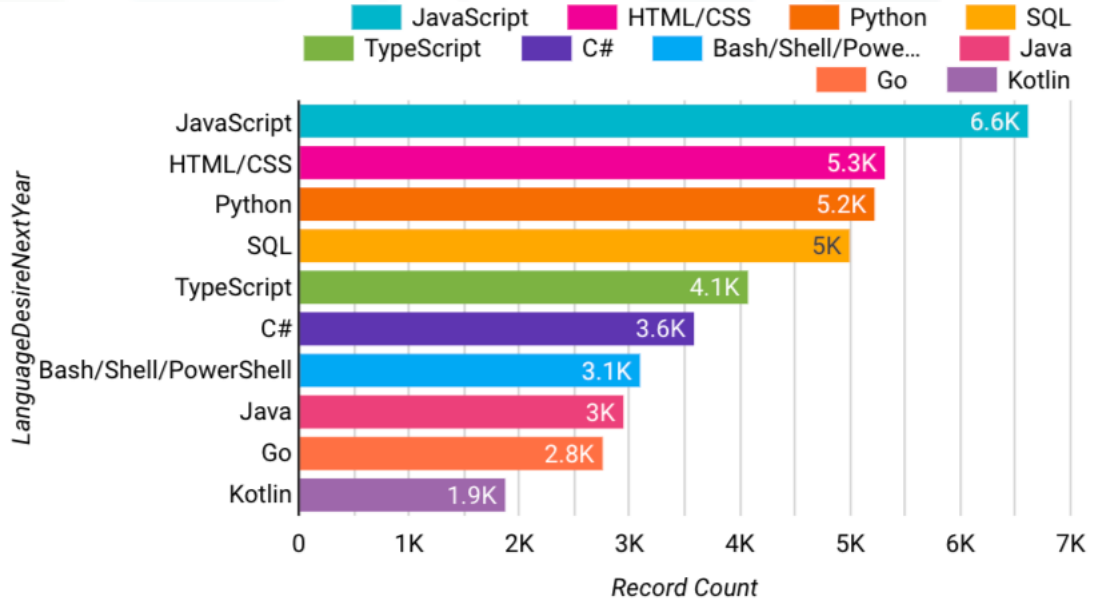
SKILLS NETWORK

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

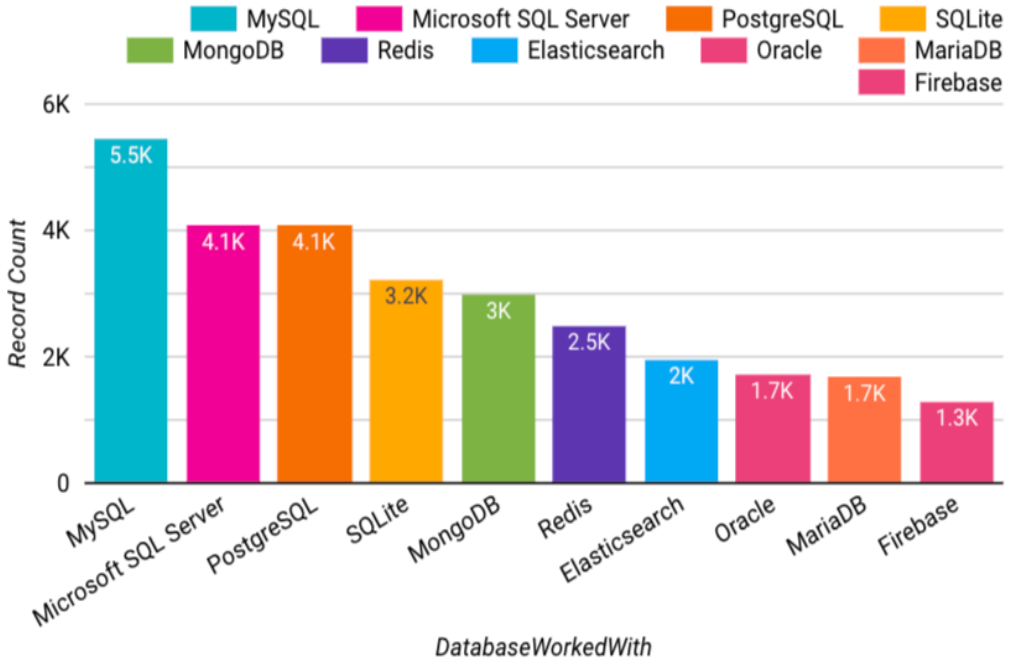
- JavaScript is the most popular programming language in the world.
- SQL and HTML/CSS continue have great position for programmers.
- Python become more popular during one year.

Implications

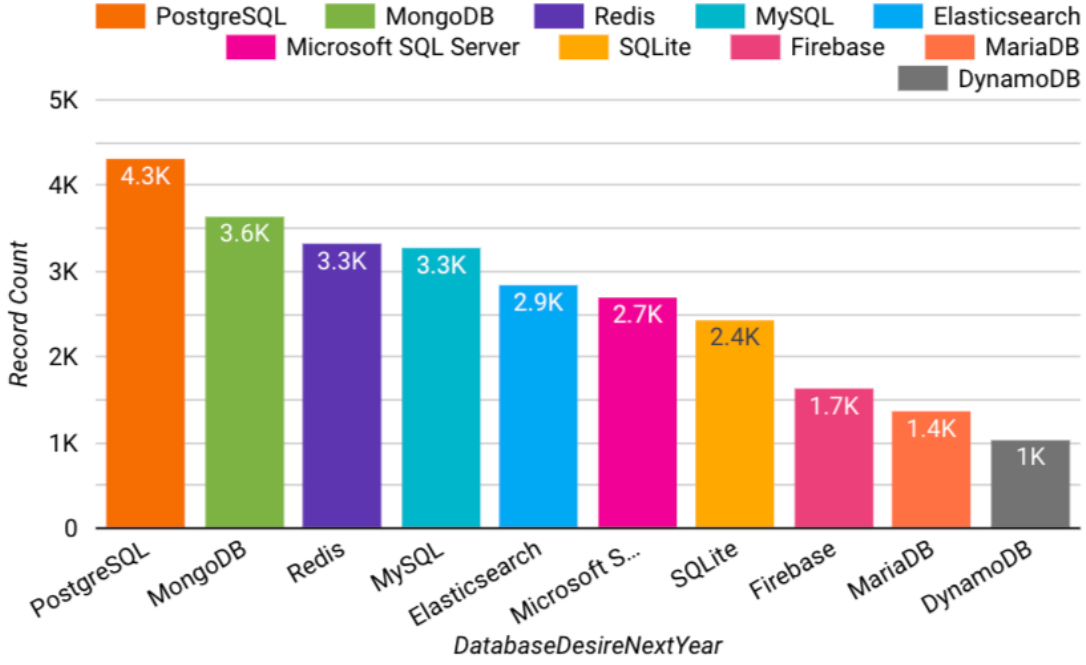
- For Web developers JavaScript still more usable.
- Python become a new trendy language, specially because its easy to implement in Data Science and Data Analysis.

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is the most usable database in the world, next is Microsoft SQL Server.
- Developers also interests to work with PostgreSQL and MongoDB.

Implications

- Open-source databases are still convenient and required.
- Become more popular databases which allow manage various types of data (like JSON)

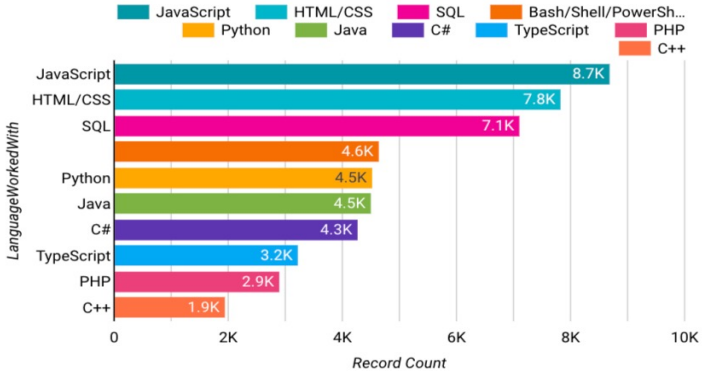
DASHBOARD

Link to the dashboard

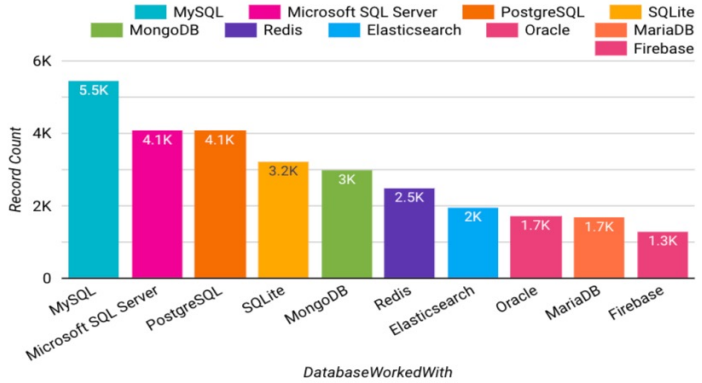
DASHBOARD TAB 1

Current Technology Usage

Top 10 Language Worked With

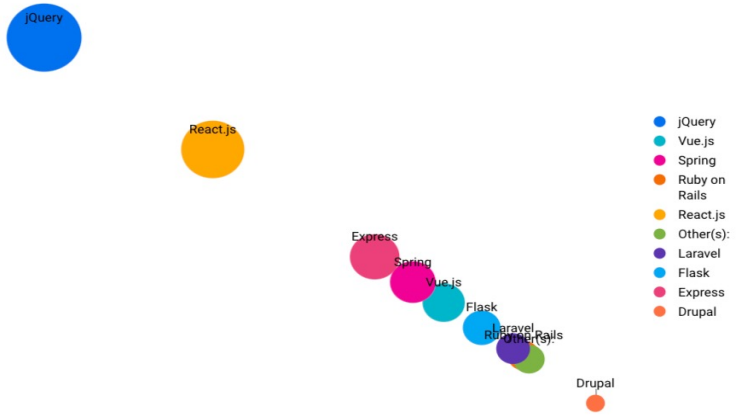


Top 10 Database Worked With



Platform Worked With

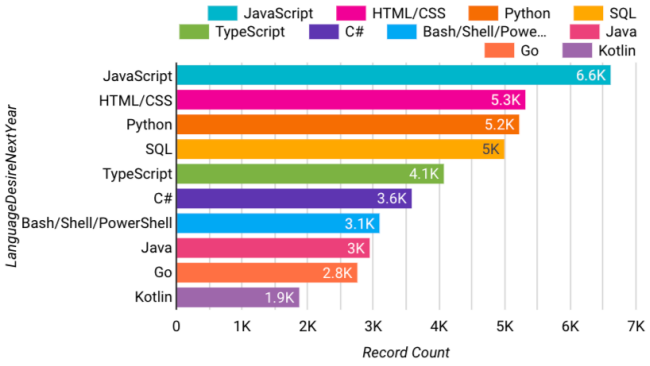
Top 10 WebFrameworks Worked With



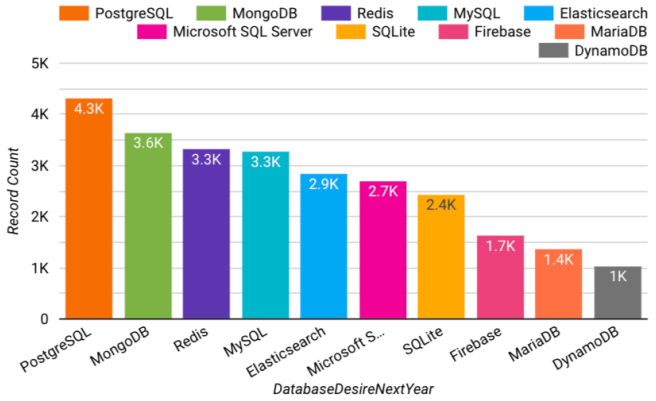
DASHBOARD TAB 2

Future Technology Trend

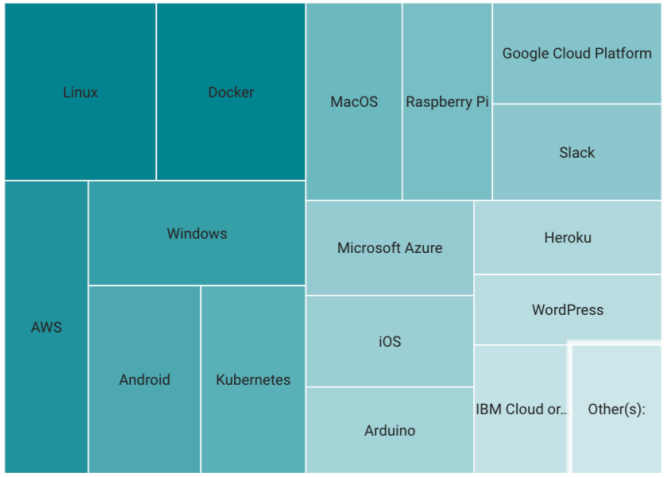
Top 10 Language Desire Next Year



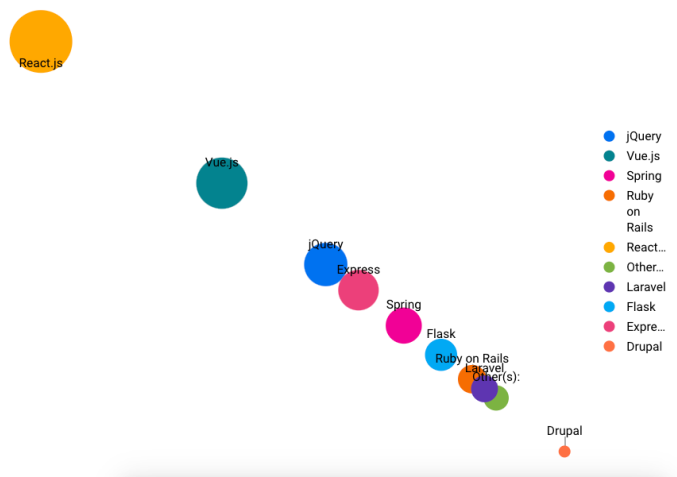
Top 10 Database Desire Next Year



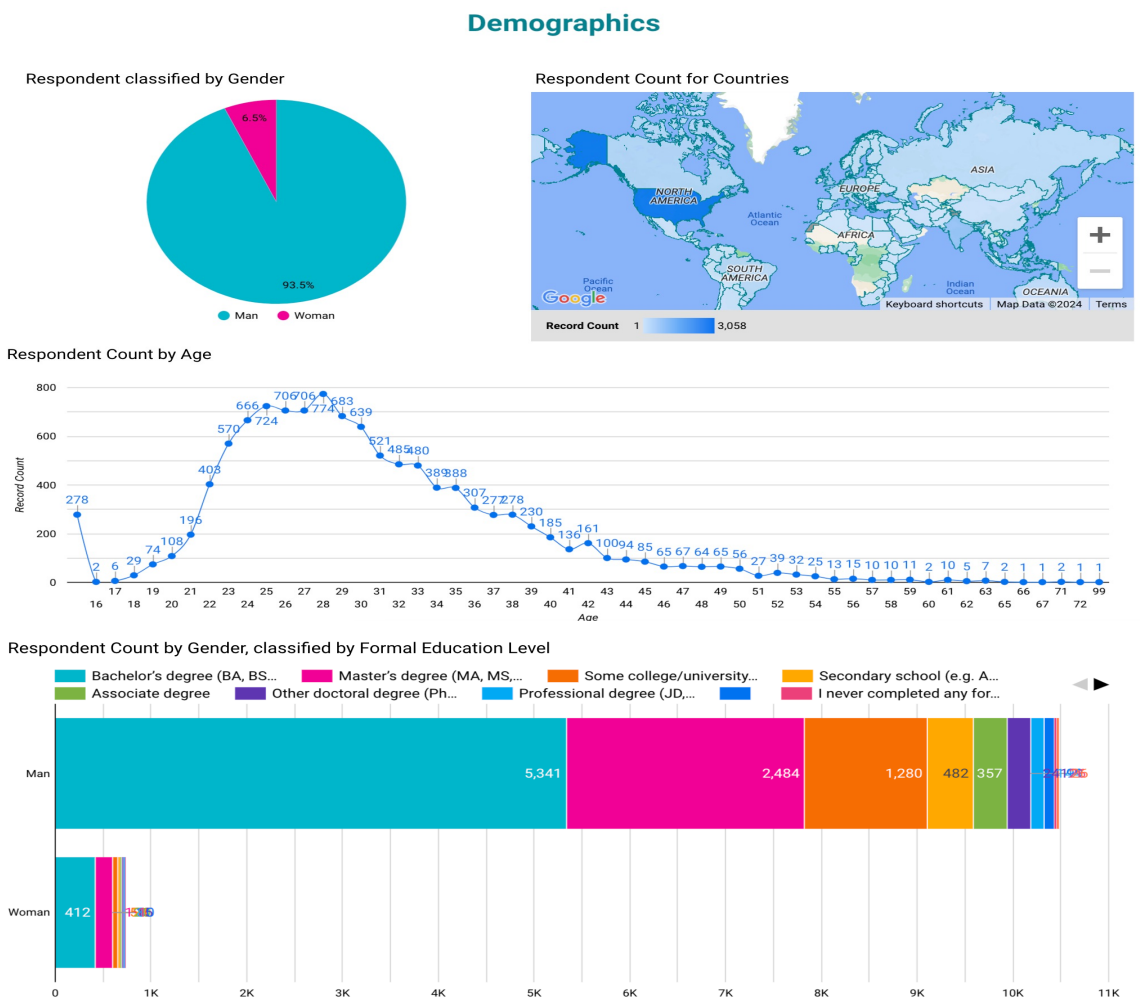
Platform Desire Next Year



Top 10 Web Frameworks Desire Next Year



DASHBOARD TAB 3



DISCUSSION

- Let’s consider our current findings from dashboards and add for them new findings from other sources!

OVERALL FINDINGS & IMPLICATIONS

Findings

- Technology trends changes super fast.
- The USA still the most technology country in the world.
- Over 93% of developers are young man.
- Majority of developers have degree.

Implications

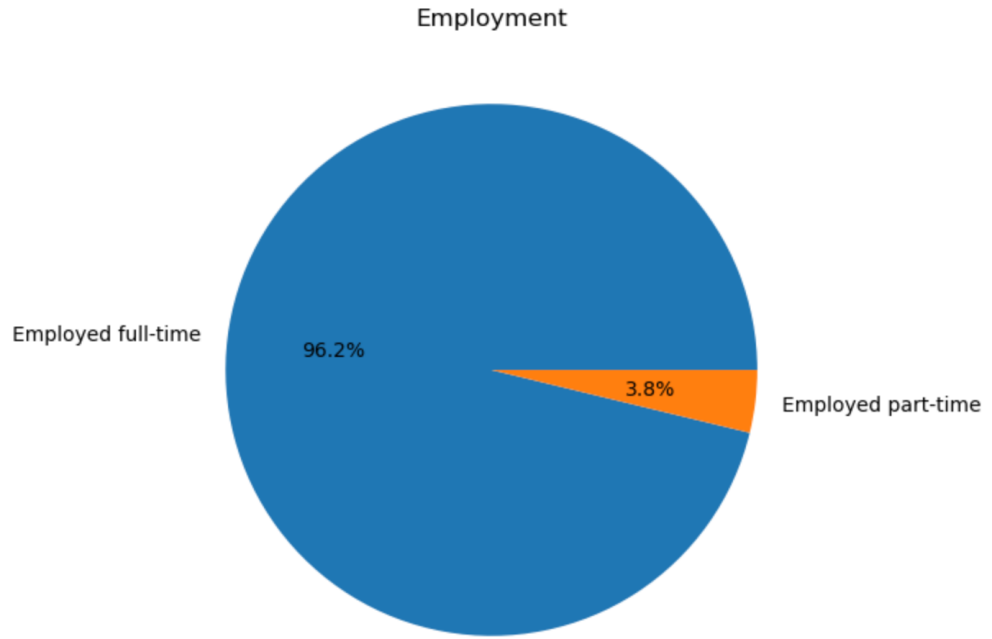
- Developers should always follow the technology trends.
- Other countries should improve their technology.
- In the technical field we have the most gap between genders and ages.

CONCLUSION

- Find trends in programming languages, Databases, platforms and Webframeworks.
- Consider who is the average developer (age, education, location, gender).
- At the end let’s compere important information from other sources :
  - What is the average annual salary have developers with popular programming languages?
  - How much opportunities developers have with different languages?

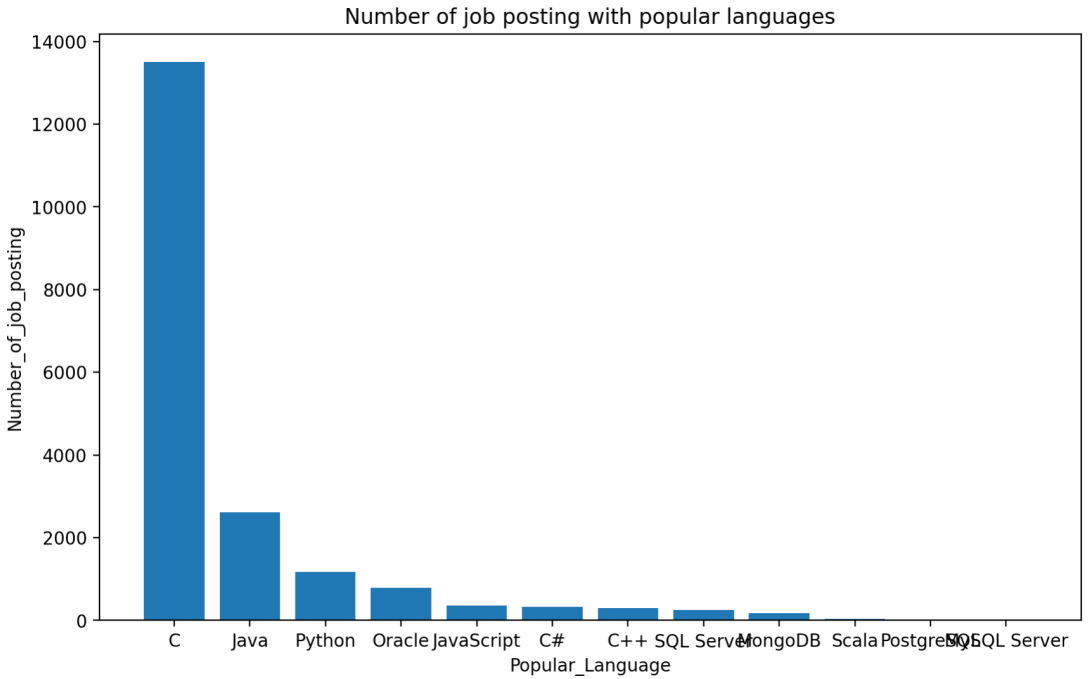
APPENDIX

- Need to add that the most of developers employment for full time job.



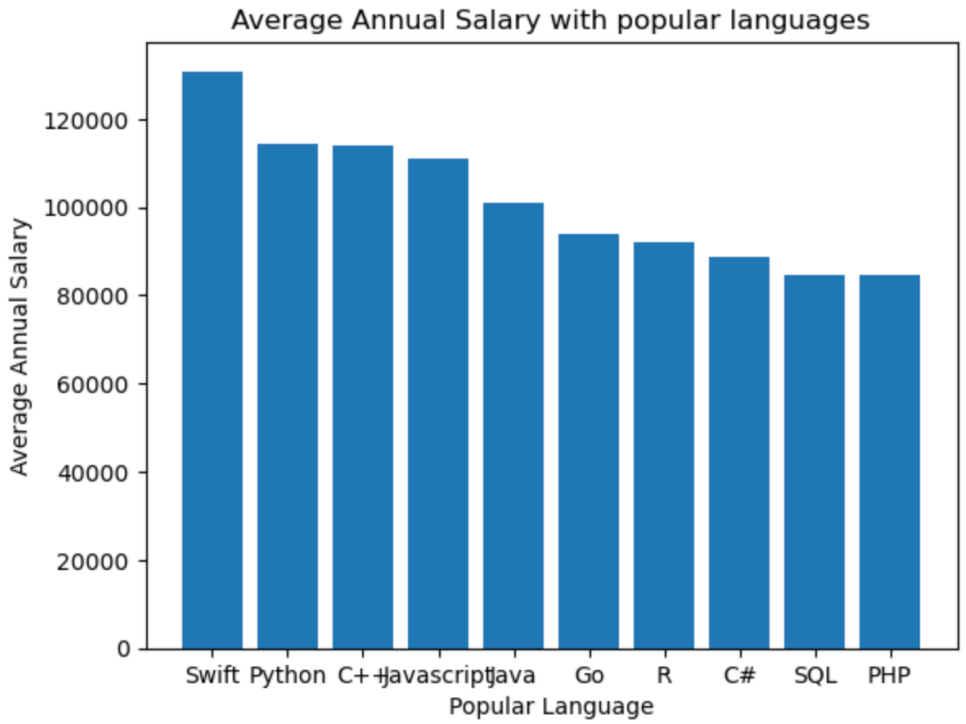
JOB POSTINGS

- The other source shows us that the C programming language is the most required, it's probably because C is the one of the fundamental programming languages.



POPULAR LANGUAGES

- From this chart we can add that developers who work with Swift have the highest annual salary, but Python, C++, JavaScript have the same salary.



Conclusions

- Technology trends changes every year.
- The USA the most technology country in the world and developers have o lot of opportunities in the USA.
- The average developer is young man with degree who has high salary and full-time job.