IT
trends
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OUTLINE

- Executive Summary
- Introduction
- Methodology
- Trends
  - Programming Languages
  - Databases
- Discussion
  - Findings & Implications
- Conclusion
- Appendix

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EXECUTIVE SUMMARY

- The trend analysis before you shows what future trends to expect regarding the development of IT tools, frameworks, databases, as well as languages in the coming time.

- The data clearly shows a move towards cross-platform development and a possible emergence of a lingua franca among developers allowing both businesses and developers an increase in productivity with none or only minimal losses.

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INTRODUCTION

- Understanding trends within IT, be it product development or which databases is important for both developers as well as businesses.
- Developers gain from this knowledge by understanding what items to focus on when self-developing
- Companies understand what is popular among developers and can prepare for changes accordingly

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METHODOLOGY

- Obtain data from Stackoverflow
- Perform data cleaning
  - Finding and removing duplicates
  - Finding and properly imputing missing values
  - Normalizing the dataset
- Analysis
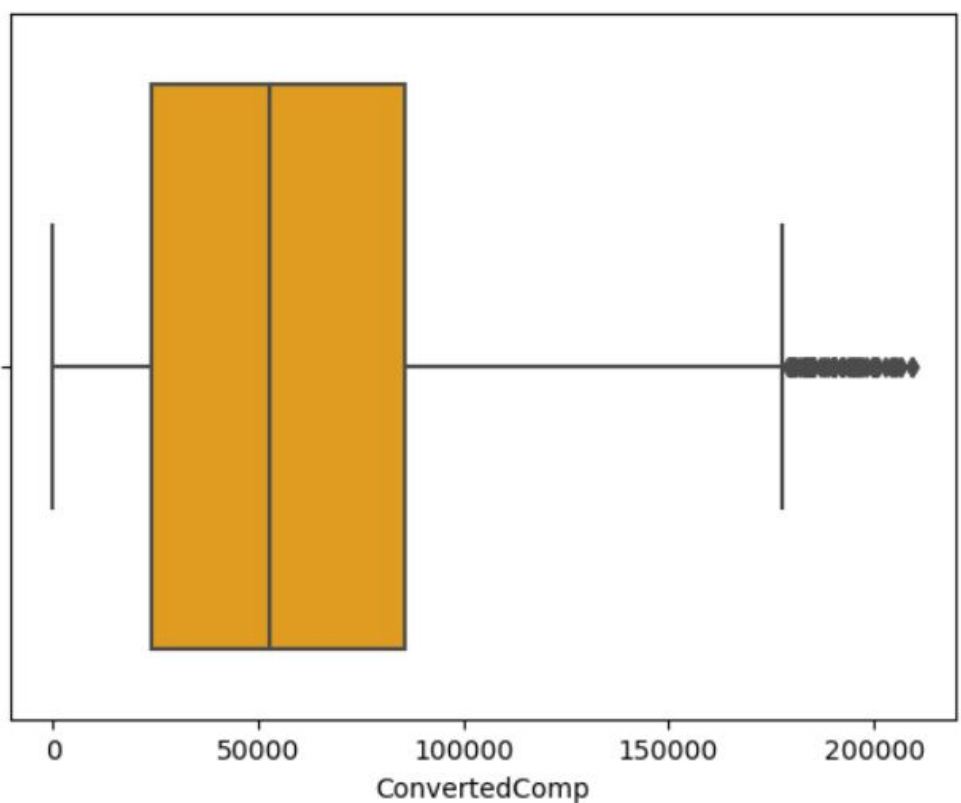 - Distribution, outliers, correlation
- Dashboarding

RESULTS-data distribution
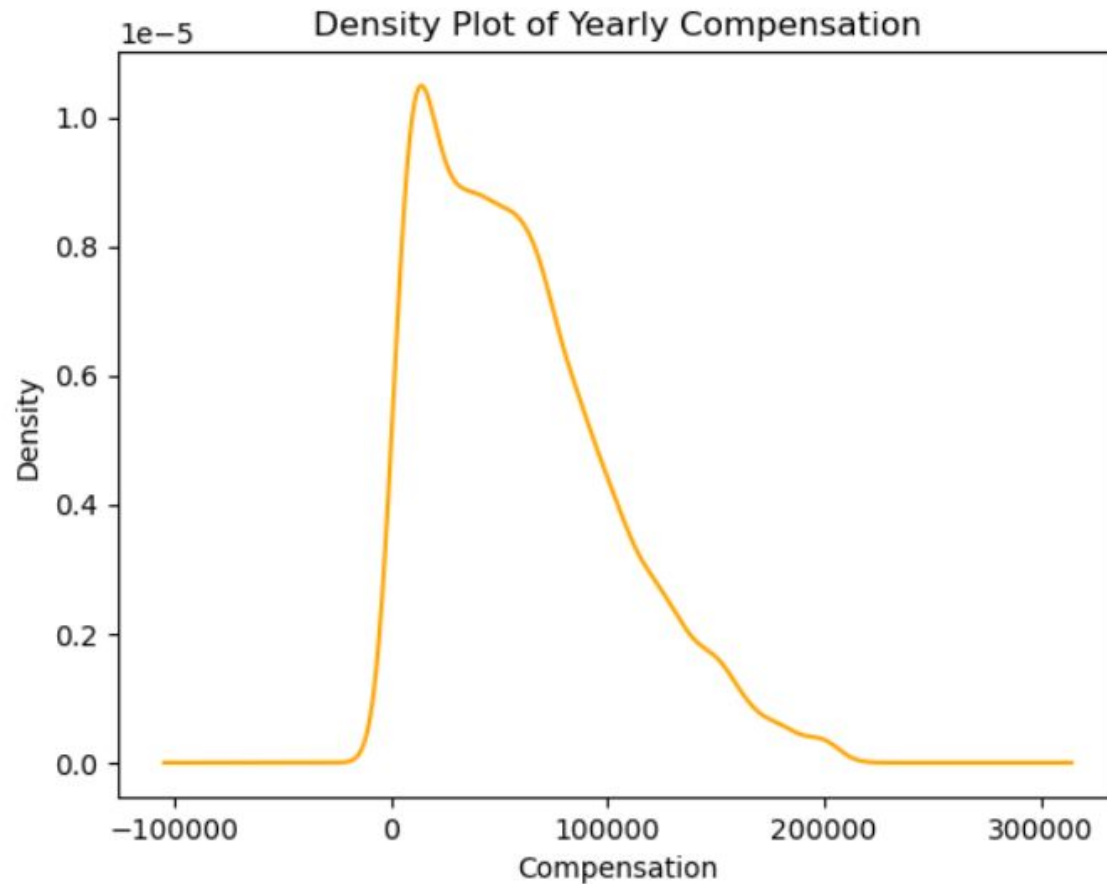
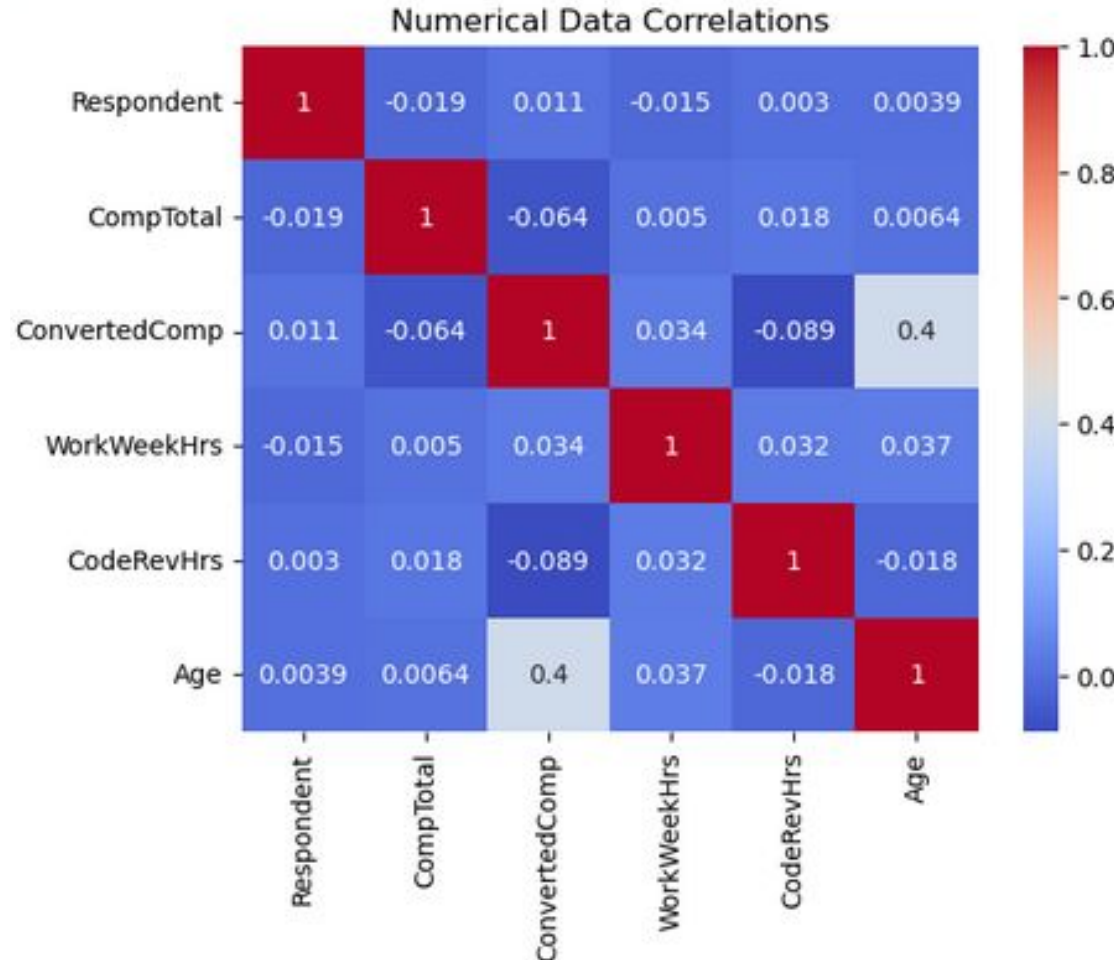The distribution is normal but there seem to be outliers on both sides
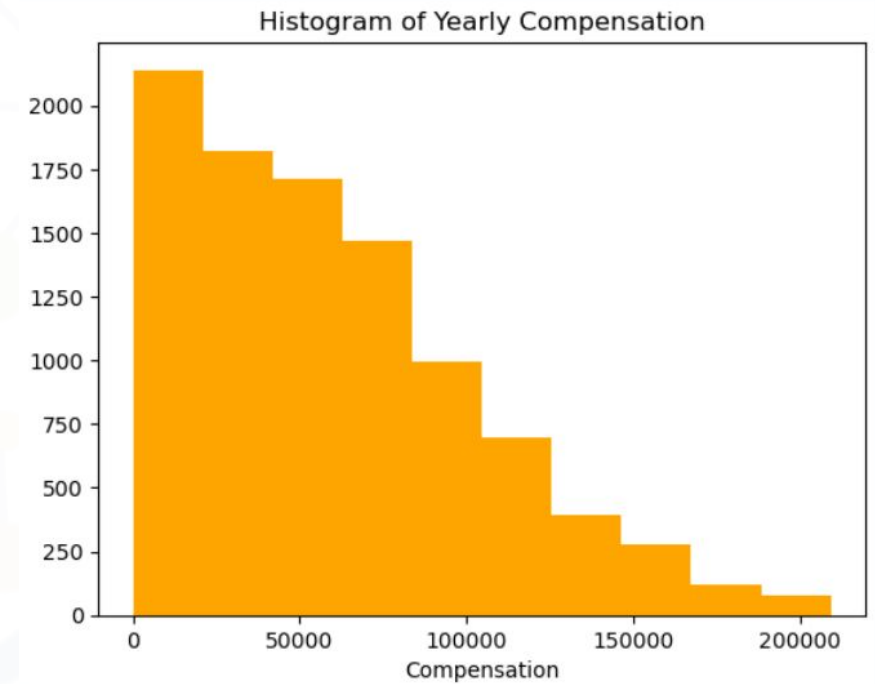
RESULTS-outliers

The boxplot shows that indeed, there are outliers. These were removed (according to instruction) based off of the IQR. Metric wise, the mean was reduced from 73132 to 58883
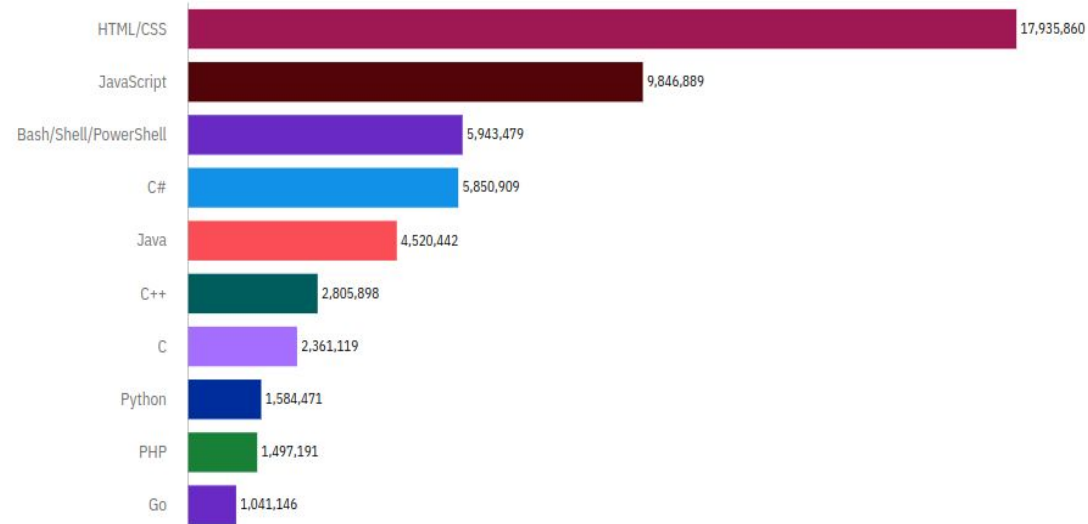
RESULTS-correlation

Numerical Data Correlations

The correlation(pearson) of the numerical variables shows age as the main driver of the compensation for the developers(among the numerical variables). It seems that the time spent reviewing the code developed has a negative impact on the total compensation. The time spent on code review (bug hunting) could show inexperience of the developer?
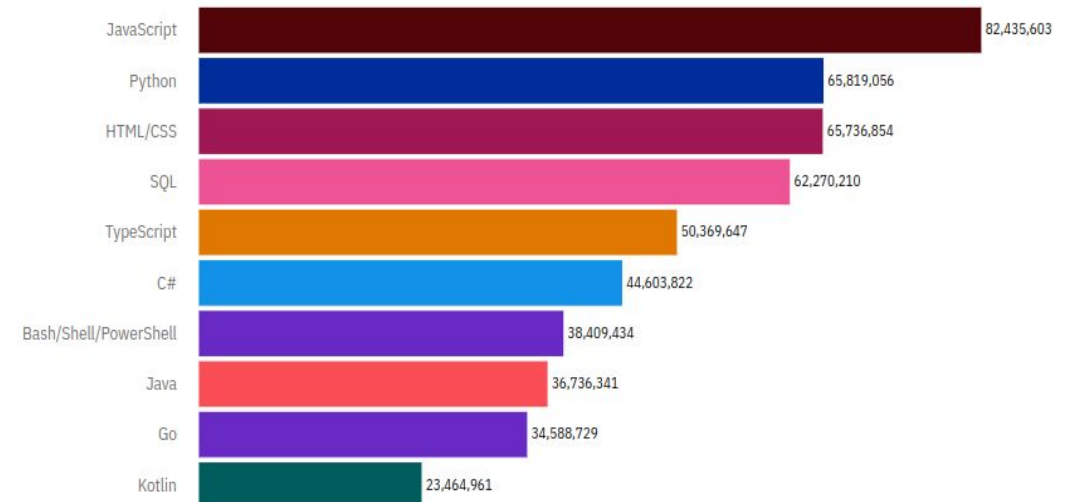
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PROGRAMMING LANGUAGE TRENDS

Top 10 Languages

Language	# of respondents
HTML/CSS	17,935,860
JavaScript	9,846,889
Bash/Shell/PowerShell	5,943,479
C#	5,850,909
Java	4,520,442
C++	2,805,898
C	2,361,119
Python	1,584,471
PHP	1,497,191
Go	1,041,146

# of respondents

top 10 languages desired in the next year

Language	
JavaScript	82,435,603
Python	65,819,056
HTML/CSS	65,736,854
SQL	62,270,210
TypeScript	50,369,647
C#	44,603,822
Bash/Shell/PowerShell	38,409,434
Java	36,736,341
Go	34,588,729
Kotlin	23,464,961

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PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS
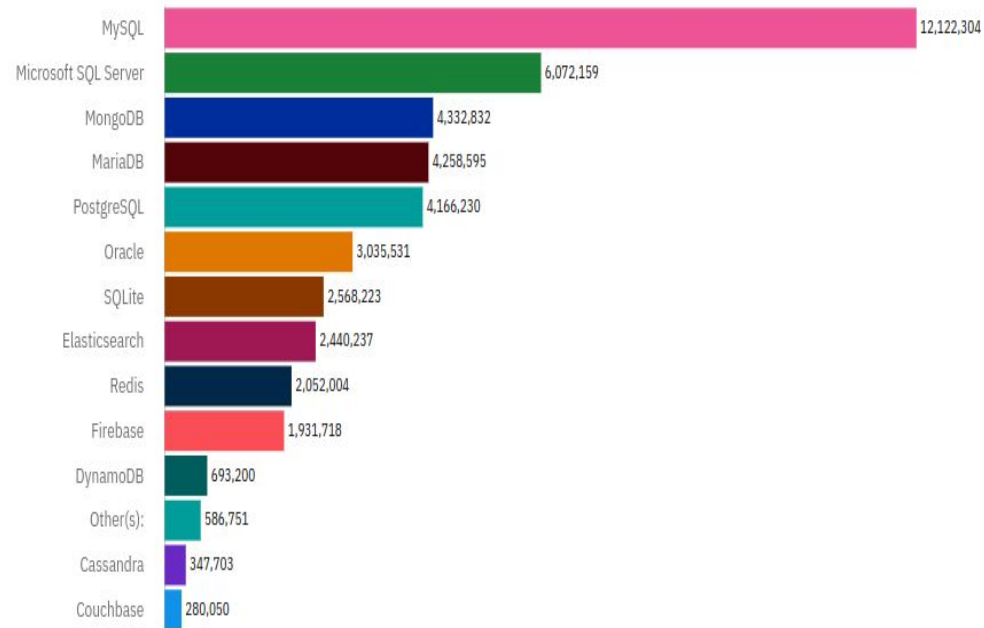
Findings

- Python is slowly becoming more and more important
- Grave differences between used languages and those that developers want to use
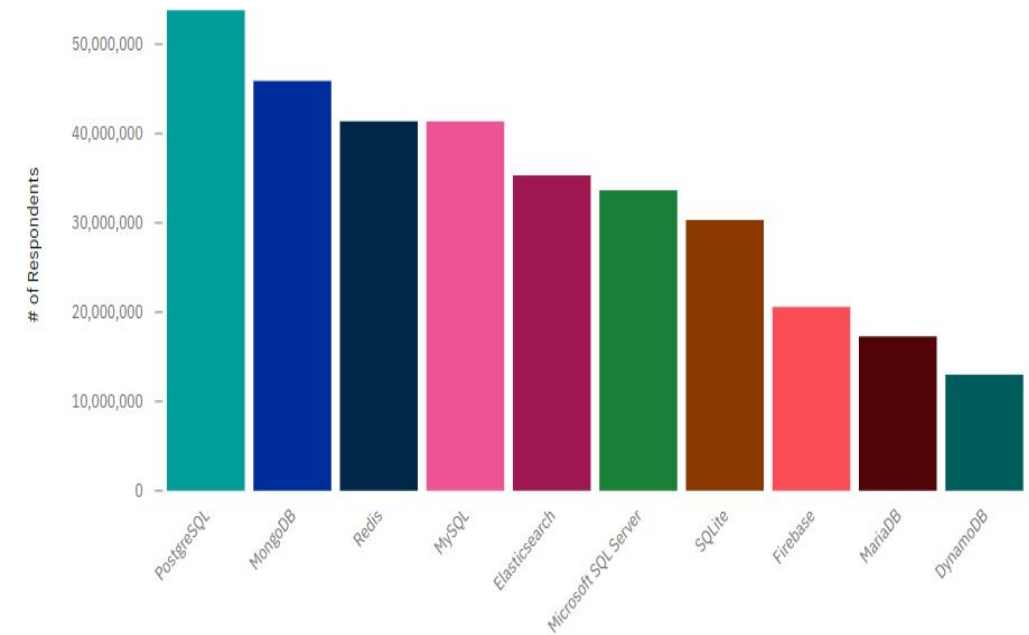- Markdown languages still important

Implications

- A single "general" tool would allow programmers to develop faster
- Legacy code makes it hard to define a "lingua franca"
- Website development still an important element of Businesses

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DATABASE TRENDS

Top databases worked with

Database	Value
MySQL	12,122,304
Microsoft SQL Server	6,072,159
MongoDB	4,332,832
MariaDB	4,258,595
PostgreSQL	4,166,230
Oracle	3,035,531
SQLite	2,568,223
Elasticsearch	2,440,237
Redis	2,052,004
Firebase	1,931,718
DynamoDB	693,200
Other(s):	586,751
Cassandra	347,703
Couchbase	280,050

Top databases desired next year

(# of Respondents by database: PostgreSQL, MongoDB, Redis, MySQL, Elasticsearch, Microsoft SQL Server, SQLite, Firebase, MariaDB, DynamoDB)

DATABASE TRENDS FINDINGS & IMPLICATIONS

Findings

- Similar databases found on both currently used and being trendy

- Microsoft SQL server used by a large number of developers
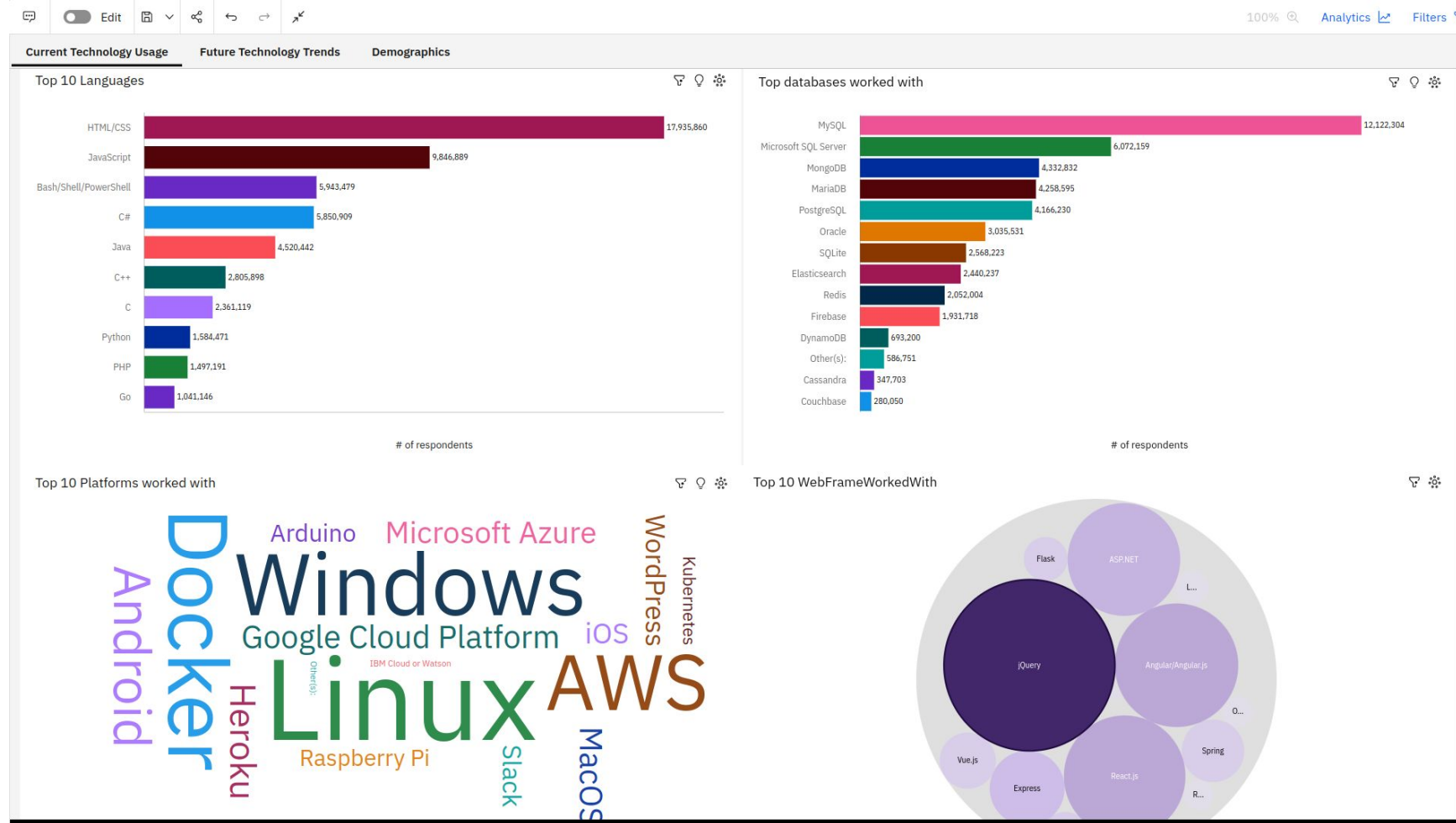
Implications

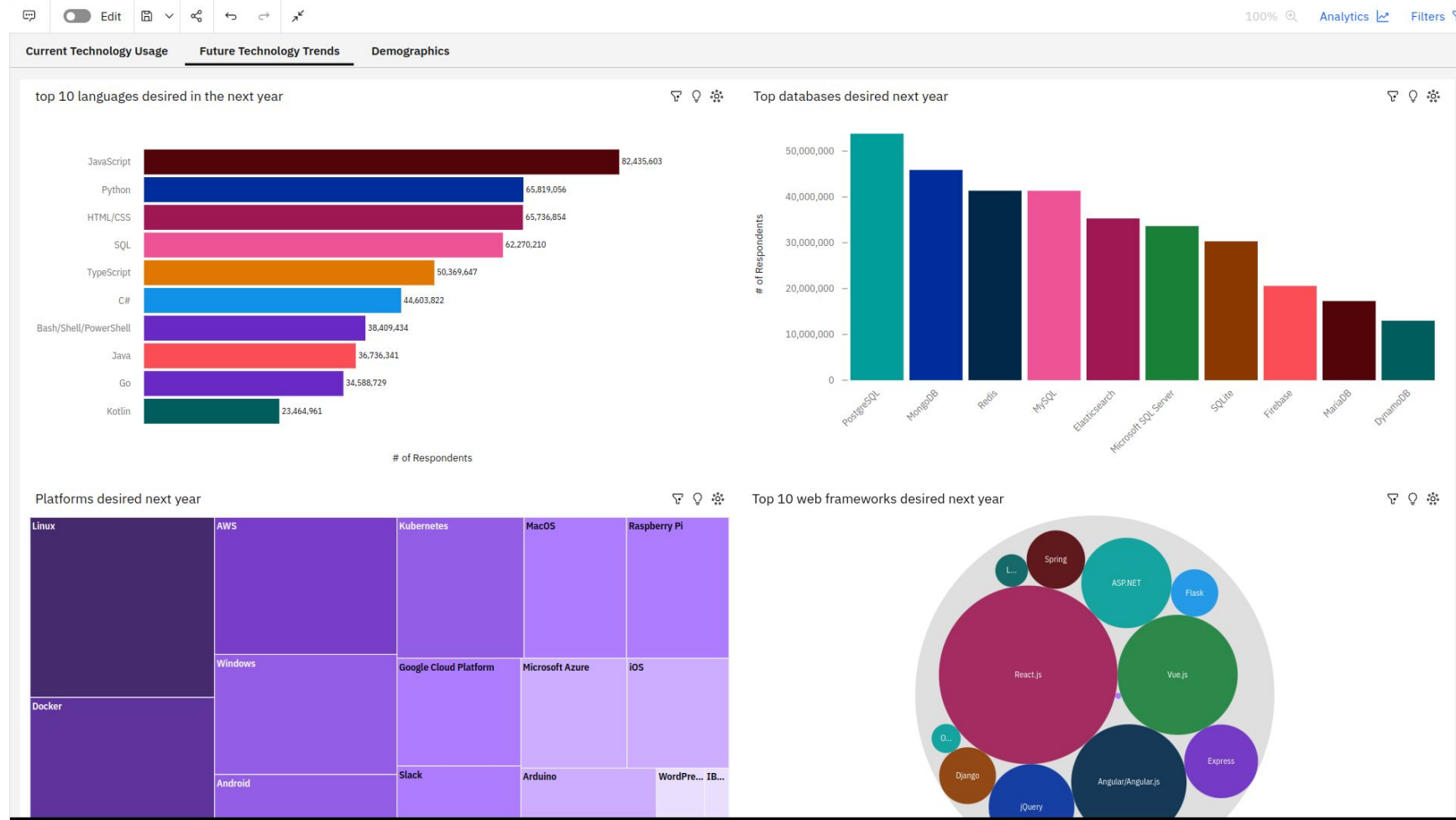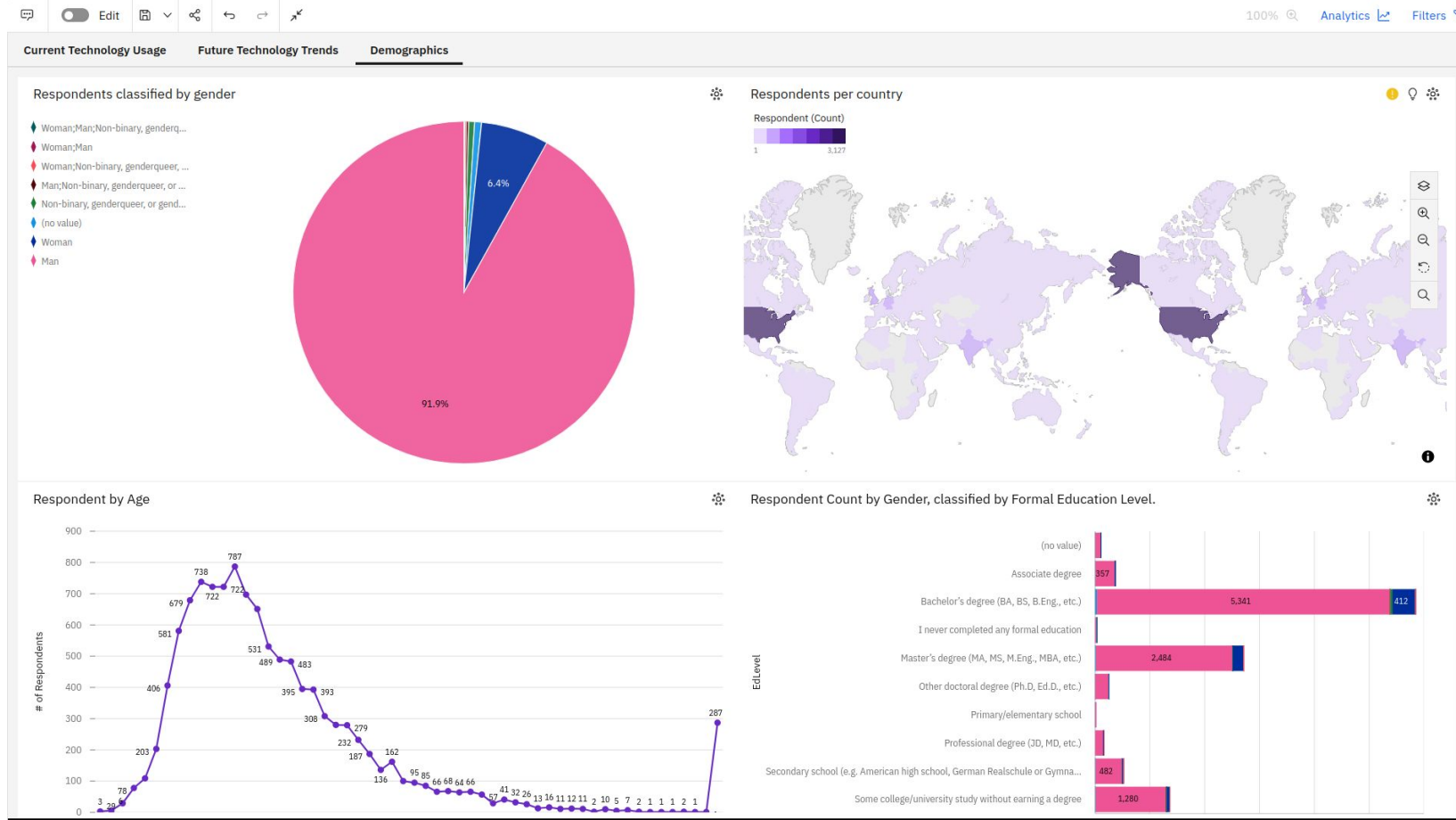- NOsql databases still not as interesting to companies as relational ones

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DASHBOARD

[LINK TO DASHBOARD](#)

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DASHBOARD TAB 1

DASHBOARD TAB 2

DASHBOARD TAB 3

DISCUSSION

Observing the data provided has shown that changes among currently used tools and frameworks are unavoidable. It seems that the tools that are "winning" the race towards becoming the "lingua franca" are those developed to allow for dealing with legacy code.

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OVERALL FINDINGS & IMPLICATIONS

Findings

- Developers are looking towards using new tools
- New frameworks developments are geared towards languages that can be used on multiple platforms

Implications

- Probable savings in both time and resources
- Cross platform development

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CONCLUSION

- New frameworks and tools will offer flexibility to the developer as well as the companies

- The trend towards multi-platform is transforming the way IT currently works and will work in the future

APPENDIX

- Include any relevant additional charts, or tables that you may have created during the analysis phase.
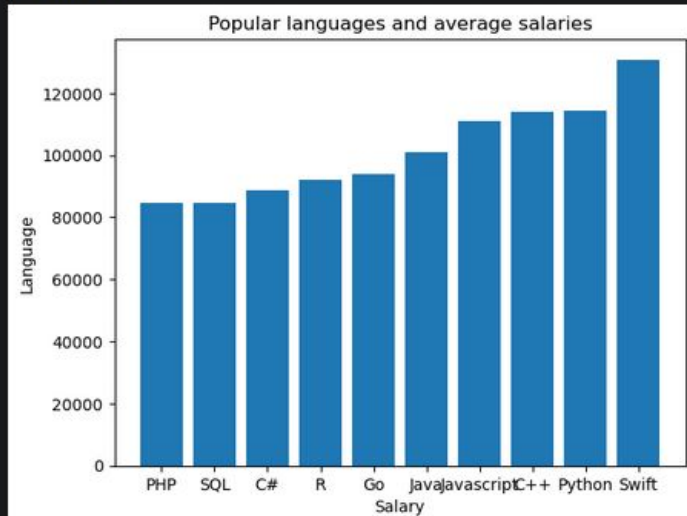
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JOB POSTINGS

POPULAR LANGUAGES