TECHNOLOGY TREND ANALYSIS

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SKILLS NETWORK

OUTLINE

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

EXECUTIVE SUMMARY

- Current Technology Usage Trend
  - Top 5 Languages
  - Top 5 Databases
  - Platform
  - Top 5 Web Frames
- Future Technology Trend
  - Top 5 Languages desired next year
  - Top 5 Databases desired next year
  - Platforms desired for the next year
  - Web Frame
- Demographics Survey

INTRODUCTION

- Analyze technology trends in software and web development among developers around the world
- Purpose of this Analysis
  - Identify the top programming languages, database platform, and web frame skills in demand
  - Identify skill requirements for future
  - Identify human resource gap in the industry
- Audience for this Presentation
  - Programmers
  - IT industry leaders
  - Computer Science students

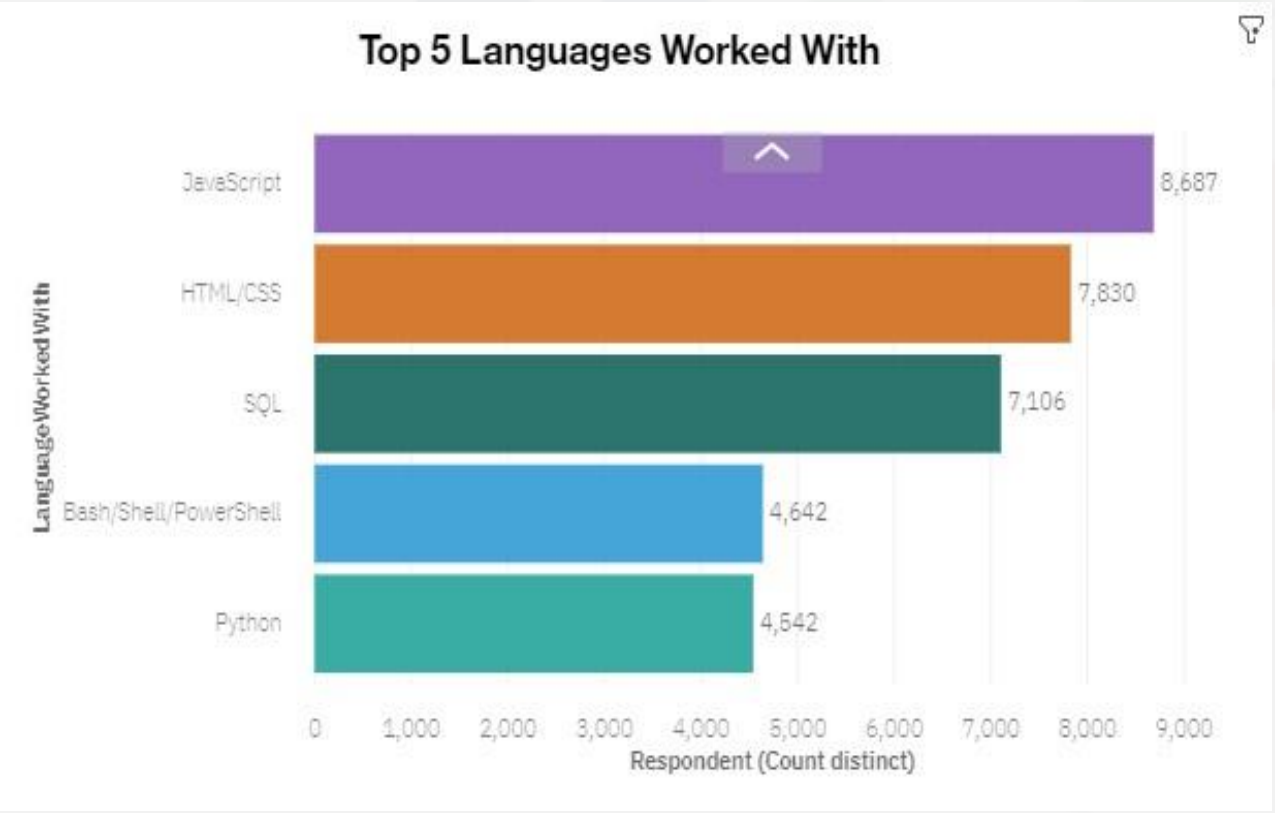
METHODOLOGY

- Data Collection (Sources)
  - Data collection using APIs
  - Data collection using web scraping
- Data Wrangling
  - Finding and deleting duplicates
  - Finding and inputting missing values
  - Normalizing data
- Data Exploration
  - Plotting distribution curve
  - Finding and removing outliers
- Data Visualization
  - Python matplotlib & Seaborn
  - IBM Cognos

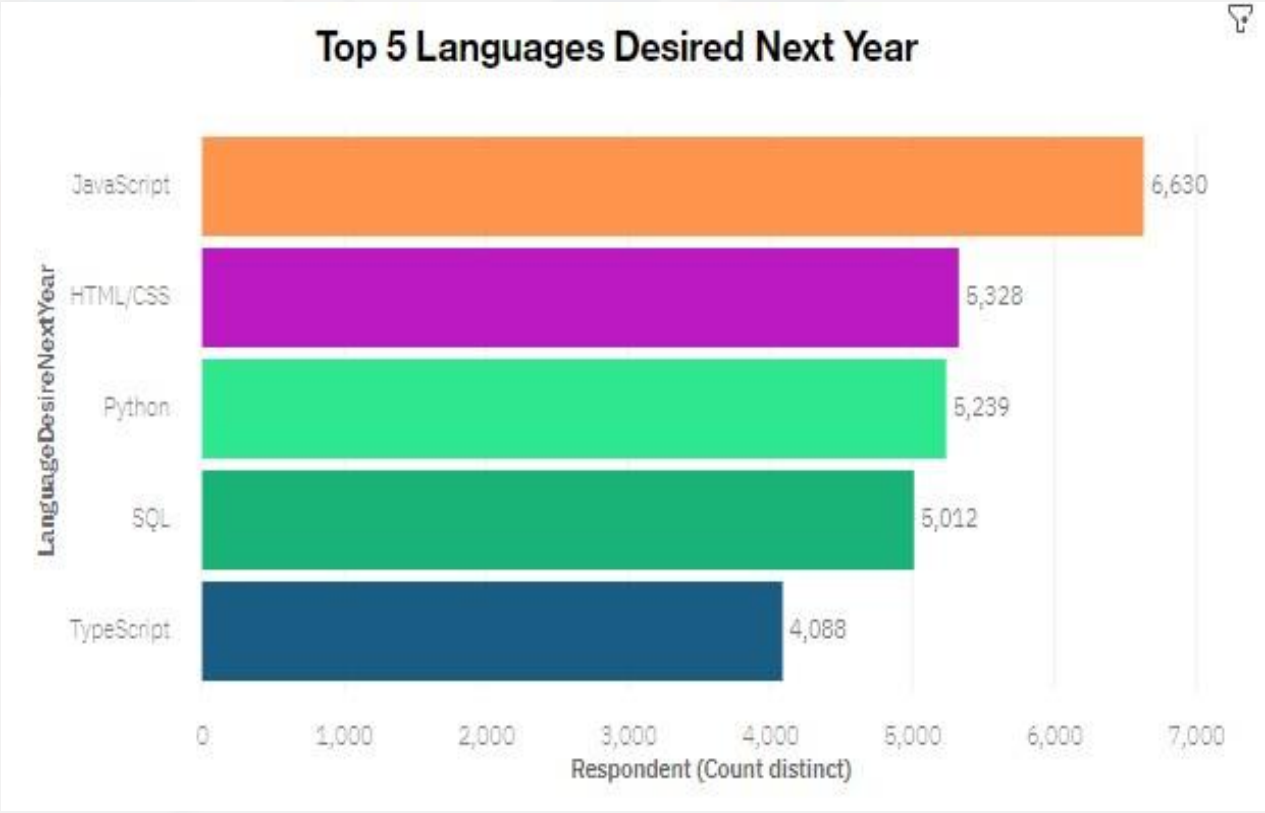
RESULTS

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



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PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

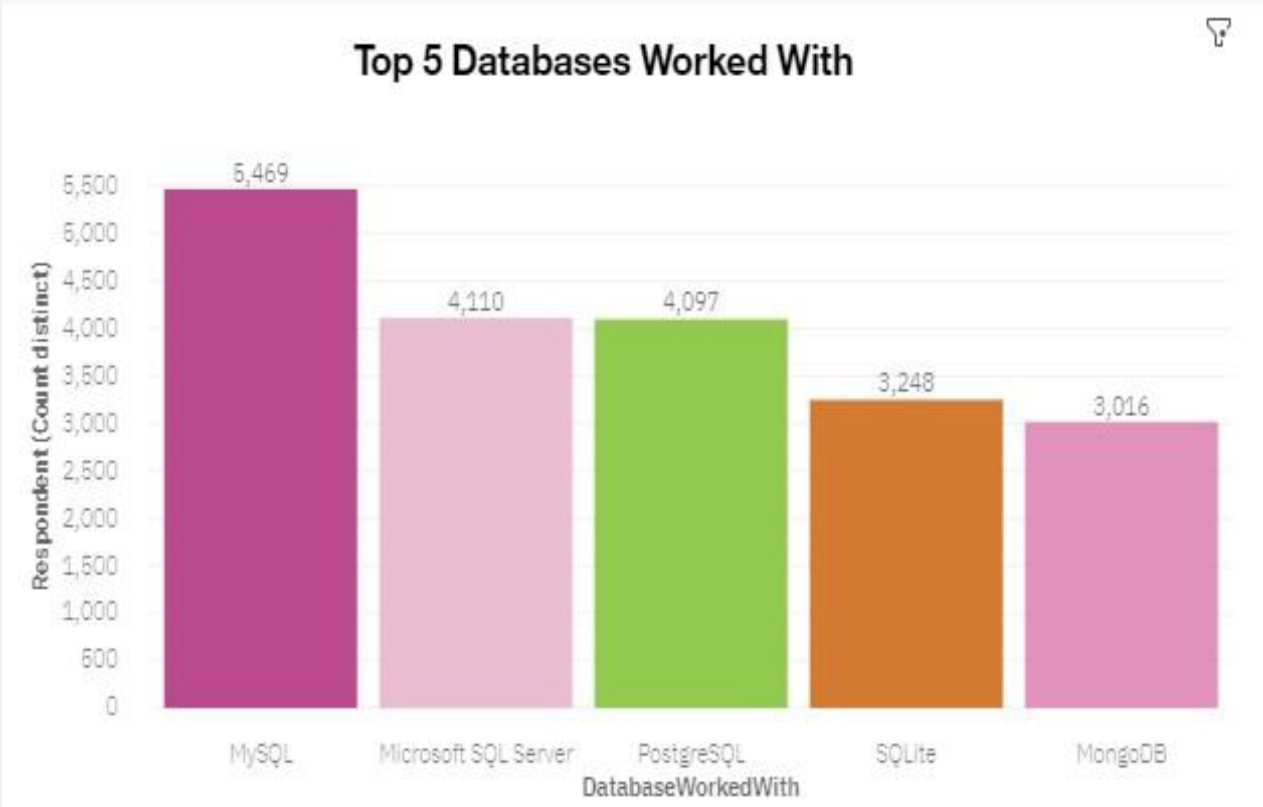
- JavaScript is the most popular language to use presently and in the next year.
- HTML/CSS is the second most popular language to use presently and in the next year
- Python moved from fifth in the present year to third most popular language to use in the next year

Implications

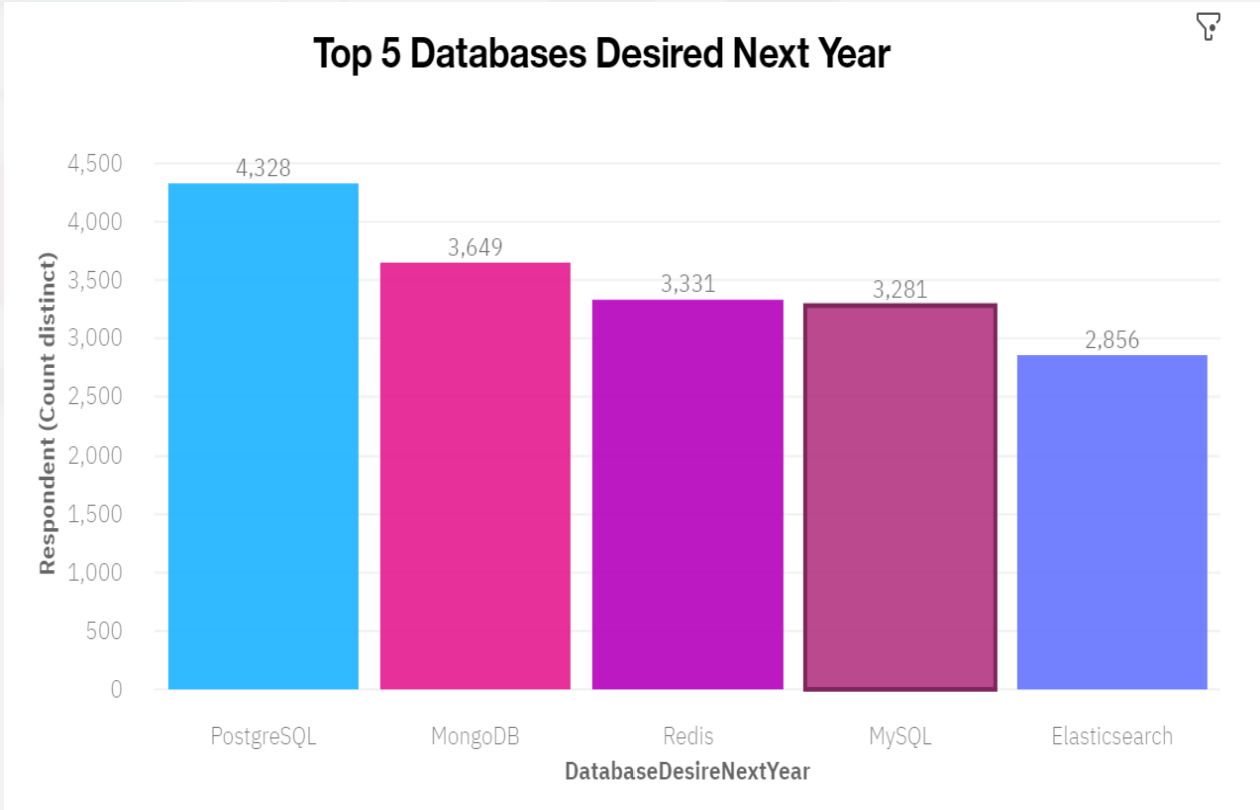
- JavaScript and HTML/CSS maintains a high demand
- Python is rising in trend and therefore will see an increase in demand
- Languages like Java, C++, C# are losing trend and therefore will see a decrease in demand

DATABASE TRENDS

Current Year



Next Year



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DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL moved from the most popular database in the current year to fourth in the next year
- PostgreSQL and MongoDB moved from third and fifth in the current year to first and second respectively in the next year
- MongoDB and Redis are the most commonly used NoSQL database

Implications

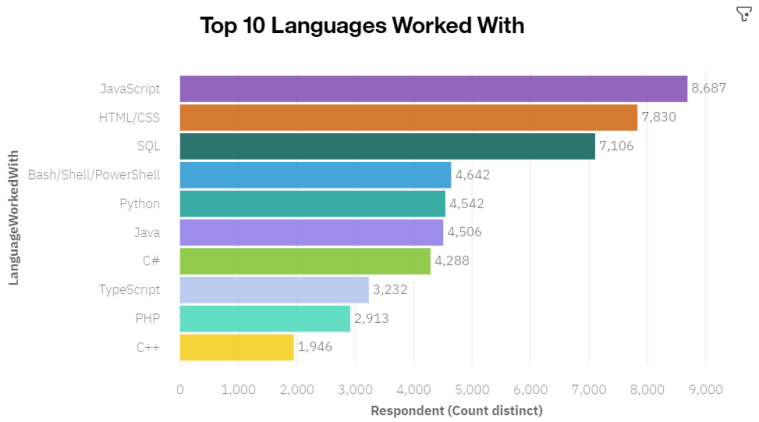
- MySQL will reduce in demand in the nearest future
- NoSQL databases will see a significant increase in demand in the nearest future
- Big data is gaining trend is the nearest future

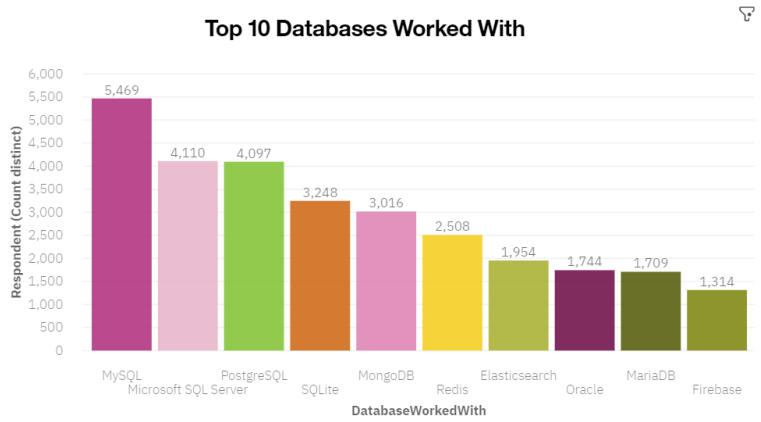
DASHBOARD

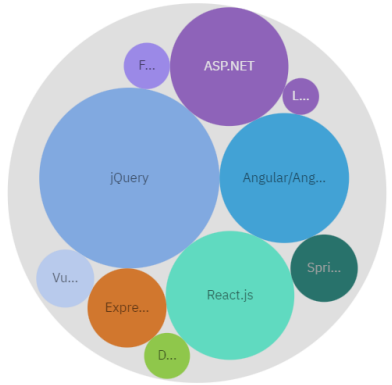
https://eu-gb.dataplatform.cloud.ibm.com/dashboards/938ca655-1035-4e0f-8b2d-2c8b99c464c4/view/791dc90405b51d8916e8e2e4079e7d552e637658e7bb8b50d2d67b490a657197a83a47c7c87c4e0bde425661f4ec165b9c

DASHBOARD TAB 1

DASHBOARD
TAB 1







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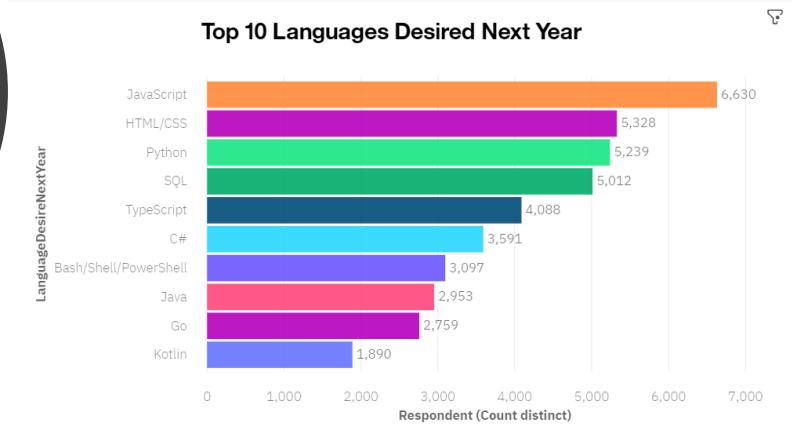
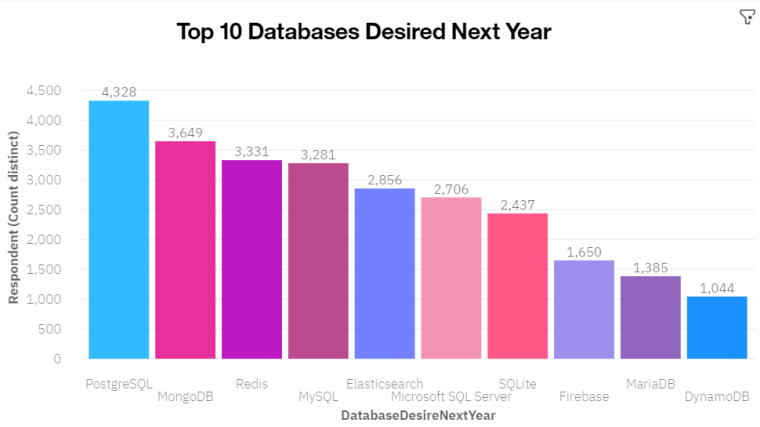
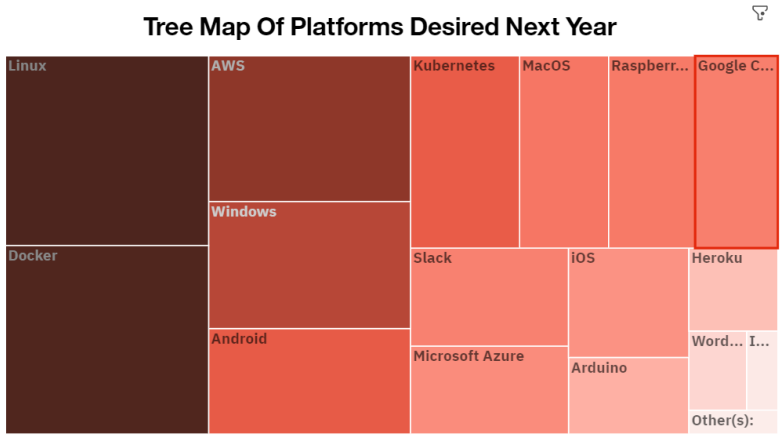
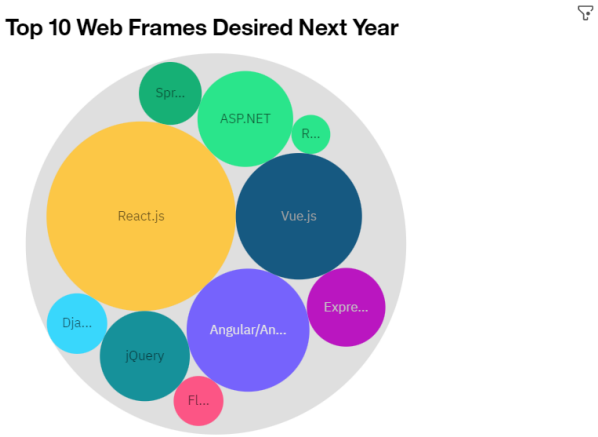
DASHBOARD
TAB 2









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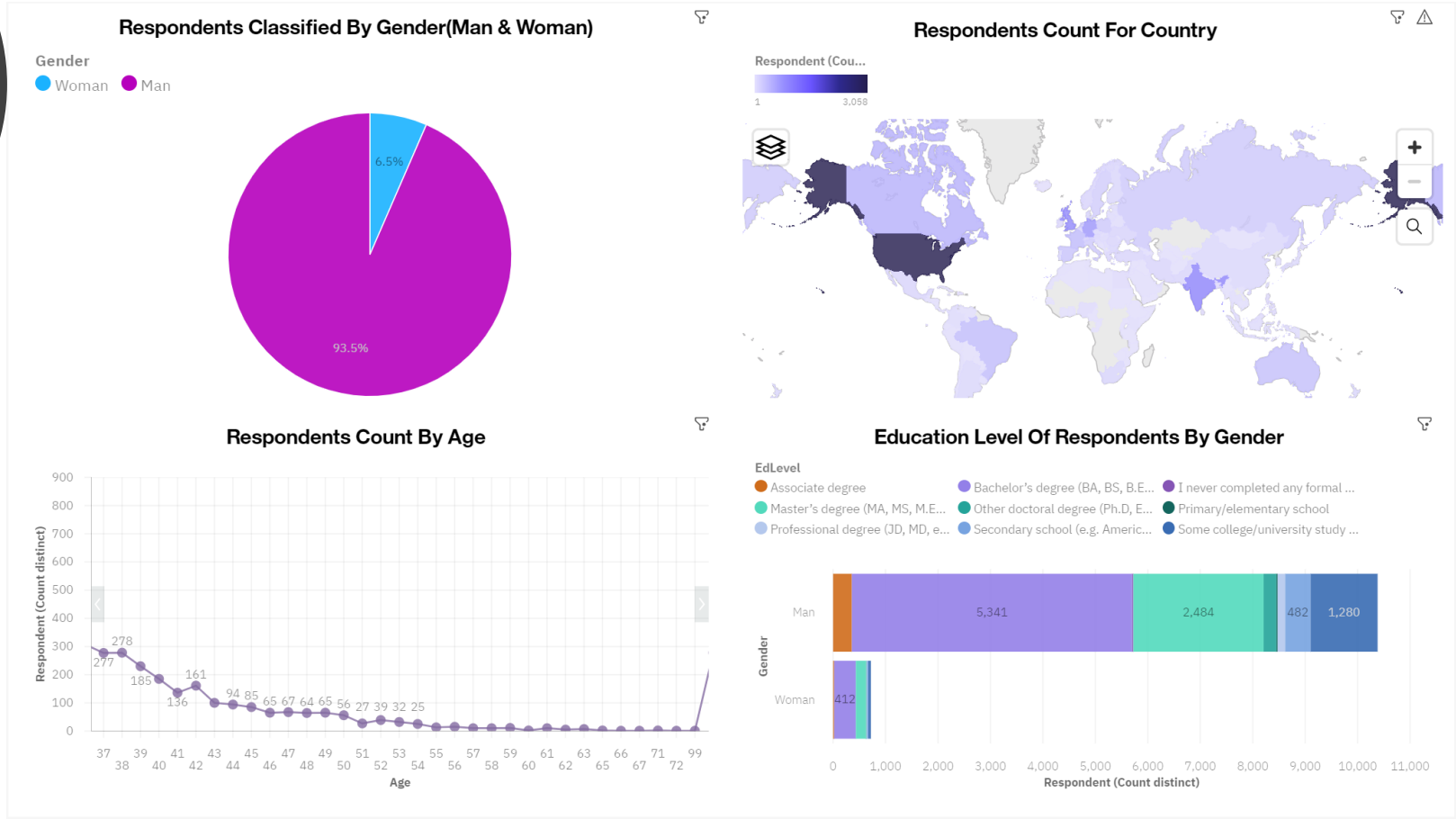
DASHBOARD
TAB 3



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DISCUSSION

- Technology usage trend shows that the nearest future is big data and the knowledge of advanced databases and programming languages will have a huge impact
- The IT industry seems to be predominant in the Western part of the world. Therefore a need to encourage and promote the industry in the other parts of the world

OVERALL FINDINGS & IMPLICATIONS

Findings

- The USA is the top technology country
- Technology trends changes
- The upcoming technology trend is in advanced languages
- Database trend is shifting towards the use of non-relational databases

Implications

- More countries should need to create better exposure to new technology
- Programmers should always watch out for changes in technology trends to stay relevant
- The emergence of big data has brought about the need for programmers to learn advanced programming languages and databases with easy learning

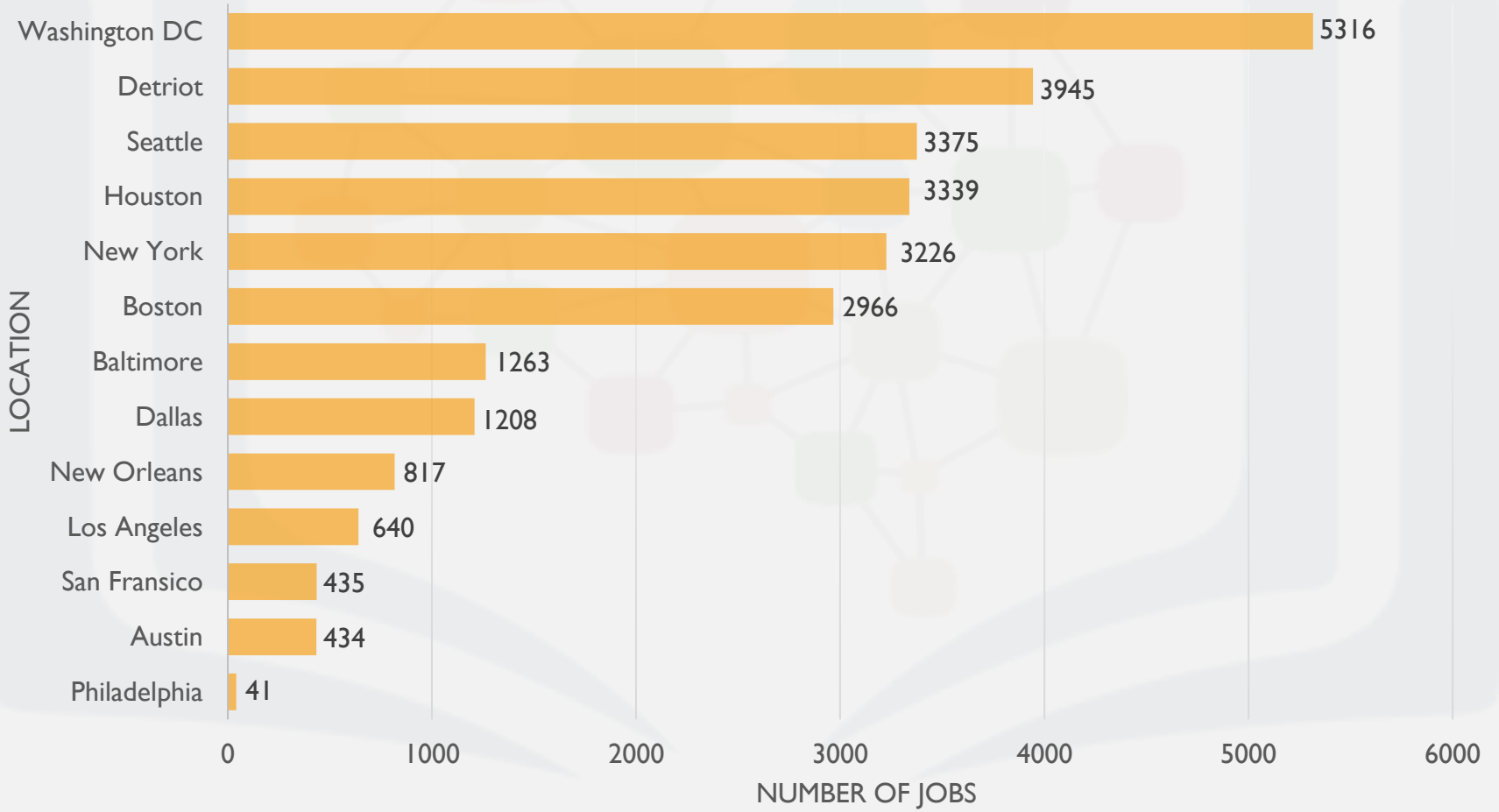
CONCLUSION

- The top programming languages to learn as a developer that will be in demand are JavaScript, HTML/CSS, Python and SQL
- The top databases, platforms and web frames in demand are NoSQLs databases, Linux and Docker platforms, React.js, Angular.js and Vue.js
- IT is a male predominant industry also having a mean age of 30.78 with the majority of people coming from the western part of the world

APPENDIX

GITHUB JOB POSTINGS

JOB POSTINGS BY LOCATION



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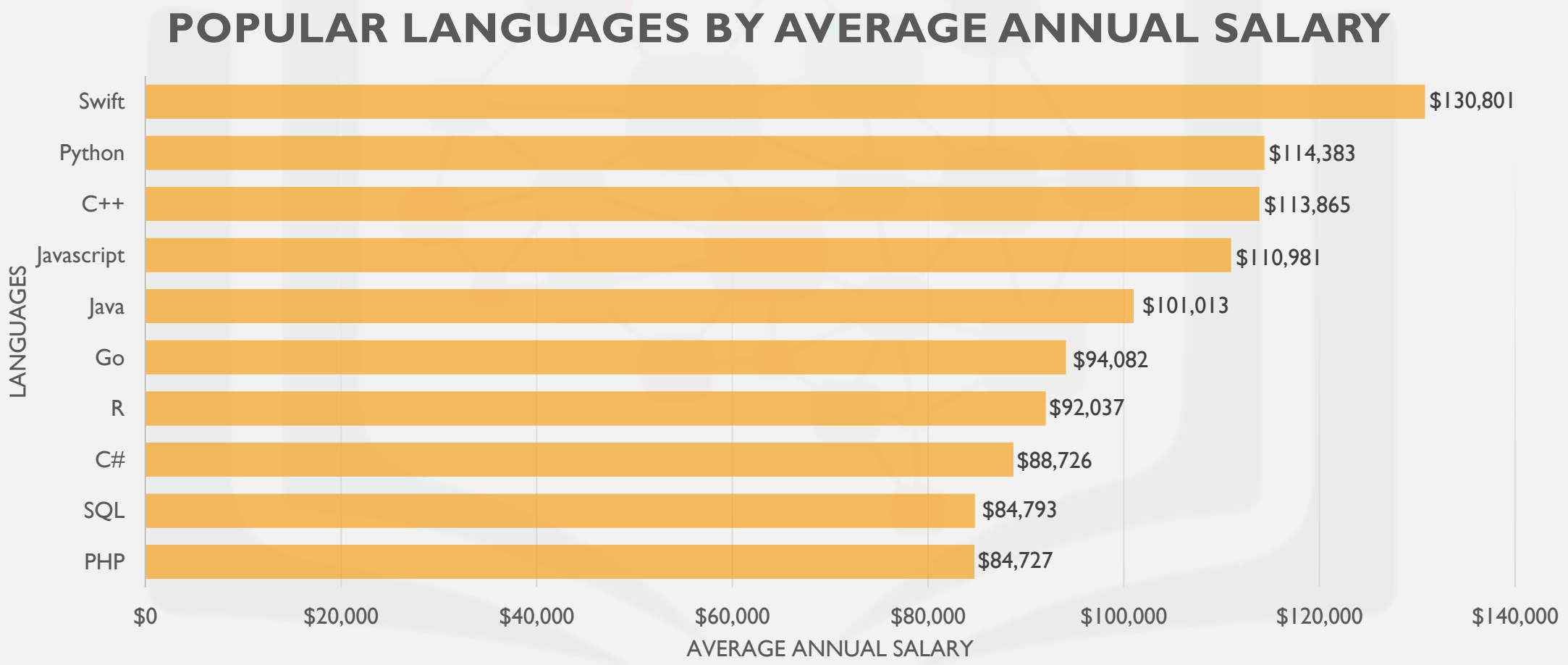
POPULAR LANGUAGES



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